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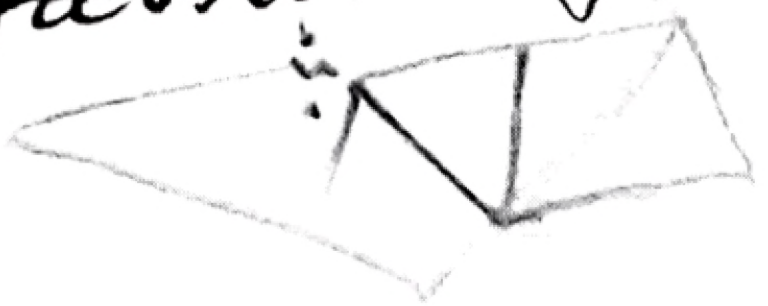

THE GROUNDWORK OF ECONOMICS

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With Test Questions

FOR MATRICULATION AND HIGHER SCHOOL CERTIFICATE CANDIDATES

BY

H. A. SILVERMAN

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PREFACE

In the past the study of Economics has been confined mainly to university and adult students, but at last we have come to recognize that the elements of the science may be usefully taught in the higher forms of our schools. Now that Economics has a place in the syllabuses of the London Matriculation and the Higher School Certificate Examination of the Northern Universities, it is probable that an increasing number of schools will include the subject in their curriculum.

In the preparation of the present volume I have borne in mind the special needs of candidates for the above examinations, and of students of a similar standard. The treatment is in simple terms, and the various examples are drawn from the facts of everyday life. The book is intended, too, to meet the requirements of the ordinary reader who wishes to obtain a general introduction to the science.

H. A. S.

CONTENTS

INTRODUCTION

THE SUBJECT-MATTER OF ECONOMICS

SYNOPSIS

Social science deals with the relations between men living in a community. The subject as a whole is too vast for purposes of ordinary study, and is therefore divided into a number of departments. Economics is that branch of social science which studies the activities of man in providing for his material wants. Other branches of social science are ethics, politics, and jurisprudence, all of which have an important bearing on practical economic questions.

Economic laws are simply statements of tendency; they are not "natural" or inviolable, and regulation is frequently necessary to mitigate their severe effects. The present economic order is bound up with certain social institutions that have developed together with society itself. The right to private property is the chief of these institutions, but it is liable to important modifications. Freedom of enterprise and contract is another prominent element in our economic system, though here also some restrictions are imposed in the interests of the community.

The present volume is confined to the existing economic system, which is analysed under the heads of production, valuation and distribution. This arbitrary division is intended to facilitate analysis, but, in dealing with actual problems, one has to take into account the interaction of all economic forces.

"MAN is a social animal." This adage is even truer to-day than when it was first uttered thousands of years ago. Man lives in a community, and is bound by the ties of humanity and common interest. In a variety of ways he co-operates with his fellows, and thereby adds to the common good. His actions are governed by a moral code. He holds himself subject to the State, and obeys its precepts. In his pursuit of the means of livelihood he enters into orderly association with other men. Though in many ways different and apparently unconnected, the relations between the members of a community are found from experience to conform with certain general

principles, the study of which is known as social science.

Economics a Social Science.

It was formerly the practice to regard all man's social activities as the theme of a single science, and to aim at formulating a number of "laws" that would explain his behaviour in all its manifestations. But, with the advance of knowledge, it was found increasingly difficult to confine the science of social relations within the limits of a single department of study. The subject as a whole was too vast and complex to be dealt with by even the most talented. Therefore, just as in everyday life one apportions a heavy task among a number of people in order to lighten the burden, so one divides the comprehensive and unwieldy subject of social science into several branches, in order that the different aspects of human behaviour may be better examined.

Chief among the offshoot social sciences are ethics, politics, jurisprudence, and economics. (Ethics deals with human conduct from the standpoint of morality) (Politics is a study of man's relations to the State, and of the principles of government.) (Jurisprudence treats of the laws and regulations imposed by the State, and, as distinct from ethics, lays down what a man *may* do in accordance with legal decisions. Intermixed with all these forms of social relationship are the activities of man in providing for his material wants.) (The study of man's actions in getting and spending his income is described as economics.) In the investigation of strictly economic problems we are not primarily concerned with things as they *ought* to be, but rather with things as they *are*. We attempt to explain the present economic system, but to justify it would take us into the realms of the other sciences.

Man being the common factor, the social sciences are necessarily interdependent, and a single problem may be considered in the light of each. If we choose unemployment insurance as an example, we note that a sense of moral obligation caused the people to devise means whereby the suffering in times of unemployment might be alleviated ; that in designing and administering the scheme both political and legal considerations were involved ; and that before and after the plan was launched economic problems arose and demanded solution. A thing may be economically desirable yet politically inexpedient. Free trade, for instance, between all nations is an economic ideal, but many States deem it necessary on political and other grounds to impose some check on the inflow of goods, and even of people. It is, therefore, inadvisable to abstract a number of human actions, and regard them as the subject of one social science to the exclusion of all other forces. A knowledge of economics is essential to a correct diagnosis of the present system, but, when the point is reached of drafting policies and programmes for the improvement of the system, the teachings of the other social sciences must necessarily be taken into account.

Economic Laws.

Human nature cannot be reduced to a formula. Economics, together with its sister sciences, is therefore less precise in its conclusions than the " exact " sciences dealing with the physical nature of things. Thus, hydrogen and oxygen, subjected to certain prescribed conditions, will always form water ; bodies will always be mutually attracted in accordance with the principle of gravitation. From a study of the physical sciences one can lay down definite laws without fear of qualification. But in the social sciences this exactness is not

possible. Human actions are swayed by a multitude of influences, and, until all these forces are known to us and are capable of measurement, it will be impossible to enunciate a "law" in the sense of its having universal application. Hence, in many works on economics, one constantly meets the statement that certain results may be expected, "other things being equal." The economist, assuming a given set of conditions, and postulating that all external forces will remain unaltered, formulates a "law" to which, within its special sphere, the conditions are expected to conform. Some economic laws, such as that of diminishing returns to land, deal mainly with physical forces, and tend to work out in practice with a fair degree of certainty. But most economic laws are concerned with human forces, which are liable to be influenced by ethical and political factors and by other forms of so-called "friction." An economic law, therefore, is but a statement of *tendency*. If in practice its full operation is not observed, we should not infer that the statement of the law is necessarily incorrect. It would be more reasonable to conclude that the tendency laid down in the law is being counteracted by some external conditions.

Nor should we imagine that the operation of an economic law must in no circumstances be interfered with. The "classical school" of economists, a century ago, viewed economic laws almost as inviolable laws of nature, and advocated the minimum of interference. Such beneficial legislation as the Factory Acts, and the useful regulation of hours and wages, to which we are now accustomed, would have been considered by these early economists as unwarranted meddling with natural liberty and economic law. But experience has shown that legislation, though arbitrary, may usefully modify the workings of economic tendencies whose unfettered

operation might entail much suffering. For instance, a series of Acts provided minimum wage machinery for trades in which the workers were hitherto underpaid. In war and post-war years, when foodstuffs are scarce, the Government fix maximum prices and impose a scheme of rationing. These actions may appear to contravene the laws of supply and demand, but they protect the poorer members of the community from undue hardship. If we lived in perfect conditions, economic tendencies might be allowed to work themselves out without hindrance. But our social system is far from ideal, and the State frequently has to intervene in order to mitigate the severity of economic laws.

The Present Economic Order.

In pursuing our ordinary vocation we usually take for granted certain social institutions, and seldom pause to reflect whether modifications in these conditions, often regarded as fundamental, are possible or desirable. The most important of these institutions is the right to private property, which has its origins early in history. Primitive man did not own goods in the sense understood to-day. What he captured was regarded as the possession of his family or tribe rather than his own personal property. Land and the elementary instruments of production were held largely in common. In time, however, the right to private property became recognized by custom, and eventually became legalized. It was justified, too, on economic grounds in that it provided a stimulus to effort and enterprise, conserved wealth and prevented its destruction, and paved the way for the present economic system.

Nevertheless, the State, while it does not tolerate the interference of one individual with the property of another, exercises its own right of intervention if such

action is deemed to be in the interests of the community as a whole. The State takes a large share of the income of its citizens in the form of taxation. It also uses its power to appropriate, with due compensation, any property that is required for public purposes, such as housing and town-planning schemes. Especially in periods of emergency, such as a war or a general strike, does the State take advantage of this power.

Bound up with the right to private property is the freedom of enterprise and contract. In general, one may choose what occupation one pleases, make or sell what one likes, and engage in what business undertaking one thinks fit. But the freedom of economic action is subject to even more limitations than the right to private property. Thus the State imposes restrictions on the manufacture or sale of noxious articles; it forbids one to practise in certain professions unless the necessary qualifications are first obtained; it prohibits the carrying of letters in competition with the Post Office. Economic freedom is also subject to the interference of private bodies. The trusts and other forms of restrictive monopoly have themselves been brought into existence often by the unfettered operation of competitive forces.

These social institutions, therefore, important and deep-rooted though they may be, are not as immutable and eternal as is often supposed. The "right" to private property, though it appears fundamental, is not a "natural right," but one that has developed along with the economic system, and one that public policy often finds it desirable to curtail. Freedom of action, too, is a desirable thing so long as it is not prejudicial to the interests of the people as a whole. The economic order is in a continual state of transition, and the social institutions that are indispensable and seem

unalterable at one period may be found to require some modification at another.

The Scope of the Present Volume.

In this volume we shall confine our attention to the present economic order, and shall not engage in speculative inquiry as to future conditions. This does not imply that a study of means whereby the present system could be improved is of secondary importance. Indeed, the main use of economics is to assist in the betterment of human life. But before one embarks upon a scheme of reform one should at least have a knowledge of the workings of the economic system as it is. Otherwise the proposed remedy might be found worse than the complaint.

We shall begin the study with a short account of man's material wants, and of the nature of wealth and production. Labour and the material instruments of production will be examined, and then the organization of industry will be investigated in some detail. Attention will be given to the economies of specialization and the localization of industry, the functions of enterprise and risk-taking, the size of the business unit, the competitive system, and the degree to which it is being modified by combination and monopoly.

We shall next survey briefly the mechanism of exchange, which is really part of the system of production. The characteristics of money and the gold standard will be described, together with the operation of the credit system, and the way in which it facilitates large-scale production. Following the account of the method of exchange, we shall proceed to analyse the principles that underlie the valuation of goods, and to inquire into the relationship between the monetary system and the general level of prices.

The production of wealth having been dealt with, it will remain for us to consider the extent of the social product and the manner in which the income is distributed among the various classes. In this connection we shall examine the nature and determination of wages, interest, profits, and rent.

It should be borne in mind throughout that the conventional division of economics into the departments of production, valuation, and distribution is made only for the purposes of clear study, and that the arrangement is purely theoretical. For no sooner do we attempt to isolate a particular problem than we find it inextricably connected with a host of other subjects. One question leads on to another, until we discover that economic forces have neither beginning nor end. To state that wealth must be produced before it can be distributed is self-evident; but the actual method of distribution has an important bearing on the scheme of production. Both production and distribution are governed by the principles of valuation, subject in each case to a growing amount of authoritarian intervention. Hence, while it is convenient for us to study each branch of the subject in turn, we should at all times endeavour to place it in its proper relationship to all other forms of economic activity, and, having done that, to regard the whole of economic study in its true position among the social sciences.

CHAPTER I

THE PRODUCTION OF WEALTH

SYNOPSIS

1. *Wants and their Satisfaction*

The material wants of mankind; wants are unlimited, satiable, alternative, competitive, and complementary. Utility is the capacity to satisfy a want; distinguished from usefulness and pleasure. Wealth is that which possesses utility and is limited in quantity; is narrower in scope than welfare. Production is the creation of utilities; utility of place, of time and of form; personal utility; production is not complete until article is in hands of consumer. Consumption is the destruction of utilities; "productive" and "unproductive" consumption.

2. *The Productivity of Labour*

"Productive" and "unproductive" labour; effort that creates utilities is productive labour; skilled and unskilled, mental and manual, responsible and automatic, labour. Conditions influencing the productivity of labour: (*a*) stock and environment, (*b*) personal qualities and industrial training, (*c*) conditions of employment, (*d*) hours of labour, (*e*) wages and the manner in which they are spent.

3. *The Material Factors of Production*

Land a natural factor of production; more comprehensive than the term in its ordinary sense. Population and food supplies; the Malthusian doctrine that population tends to increase at a faster rate than the necessaries of life; the "niggardliness of nature" countered by the discovery of new resources and the invention of new processes and means of transport.

Capital a produced factor; from individual standpoint, consists of wealth from which one draws an income; from social standpoint consists of wealth set aside to assist in producing further wealth. The nature of capital; comparison with land. The accumulation of capital; comes from surplus of production over immediate consumption; "savings," viewed from the standpoint of the community, rarely involve abstinence from

consumption, but represent rather the transfer of the power of consumption from one set of persons to another; the ability to save depends on one's character, the rate of interest and the opportunities for banking and investment.

1. WANTS AND THEIR SATISFACTION

The Material Wants of Mankind.

ECONOMICS deals with the material wants of mankind, and with the efforts made to obtain satisfaction. A man may produce an article for his own consumption, or, more likely nowadays, to meet the requirements of another person. It may be that he turns out the commodity in advance of the actual demand, and is ignorant of the destination of his product. But the impulse to all economic activity comes originally from the desire to satisfy one's wants, a brief account of which may be useful at the outset of our study.

"Wants" must not be interpreted too narrowly. A pauper is "in want," and can afford to buy little more than dry bread. A millionaire may "want" a yacht to satisfy his whims. The dry bread for the pauper, and the yacht for the millionaire provide examples of the wants that producers set out to satisfy. Thus, "wants" include not only minimum needs of subsistence, but also all the conventional necessaries, the comforts and the luxuries that men require. As emphasized in the introductory pages, we are not called upon in this volume to consider the moral aspects of the problem. It is sufficient for our present purposes if we examine things as they are, and leave to the other social sciences the discussions on what ought to be, and how things might be improved.

People's wants are without number. No sooner does a person satisfy the craving for one article than he experiences a desire for another. He becomes conscious

of the limitations of the article he possesses, and begins to wish for something better or different. For example, a boy may want a bicycle, and after the exercise of much economy succeeds in gaining his object. But soon he yearns for a motor-cycle, the eventual possession of which may give rise to the desire for something still more powerful. Similarly in everyday life, man's wants are unlimited. A century ago tea was consumed only by the well-to-do. Now it enters into the budget of the poorest families. The luxury of to-day becomes the comfort of to-morrow, and the conventional necessity of the day after.

Though wants are unlimited in number, they are limited in their capacity for satisfaction. We may enjoy an hour of the gramophone, but a second hour will not, as a rule, yield the same pleasure. A third hour without a break might transform the pleasure into torture. Similarly, two gramophones would not yield to the owner twice the satisfaction of one. This tendency to "diminishing utility," as it is called, is of first importance in economic theory, and will come up for further treatment when we deal with the determination of prices.

Wants are largely alternative and competitive. We may appease a thirst with water or lemonade or other liquid refreshment. We may cover a wall with distemper or paper or wood panelling. For an evening's entertainment we may choose between going to the theatre and reading a novel at home. In all these instances we have a form of competition between alternative methods of satisfying a want. The extent to which an article or service can act as substitute for another naturally influences the demand and supply; this power of substitution will also be shown to influence the fixing of prices.

Finally, wants are to a large extent complementary. One thing may be practically useless without another. What is the use of a pen without ink, or of a collar without a stud? Even if a commodity is desirable in itself, its use may be increased in conjunction with another article. Thus, bread and butter, though they satisfy wants independently, may yield a greater satisfaction when consumed together.

Utility and Wealth.

The capacity to satisfy a want is known as utility.

It does not follow, however, that a thing that possesses utility is necessarily "useful" in the broader sense of the term. Smoking may be detrimental to one's health, but, as tobacco satisfies a want, it is considered by the economist to possess utility. A thing may have utility, yet its consumption be limited or forbidden. The consumption of alcoholic liquor, for example, is subject to many restrictions, and in some countries is altogether forbidden. Nor must utility be taken to be identical with "pleasure" in the usual sense. A thing which affords pleasure may be said to possess utility, but the converse is not always true. Quinine is of great utility in curing a cold, but its consumption is far from pleasant.

All things that possess utility, however, are not necessarily wealth in the strict economic meaning of the term. "Wealth" is not so comprehensive as "well-being," which covers all conditions conducive to man's welfare. Fresh air and sunlight are both essential to life, but their supply does not, as a rule, involve any economic activity, and they are therefore known as "free goods." Where, however, air has to be artificially freshened, as in a cinema, or special devices have to be adopted in order to concentrate sunlight, as in a solarium,

economic considerations arise, and the "goods" concerned can no longer be described as "free."

Wealth, then, is not synonymous with welfare. Indeed, it is conceivable that a country's wealth might increase yet its welfare actually diminish. To take an extreme example, suppose that the air supply became restricted, and that it was appropriated by persons who sold it to consumers in the same way as an ordinary commodity. Air would have ceased to be a "free good," and would now figure as wealth. Measured in terms of money, the community's wealth would have increased, but the welfare of the people would have declined.

It is unwise to lay down a rigid definition of wealth, for the term is used with somewhat different shades of meaning, according to the particular circumstances. It will be sufficient for our purpose if we define wealth as anything that possesses utility and that is limited in quantity, or, in other words, as anything upon which a price can be set.

The Production of Wealth.

Production is nothing more than the creation of utilities. It need not involve a change in the nature or in the form of an article, for "utility" has a much wider application. Thus, a timber grower supplies the wood almost in its elementary state of utility. The shipper who conveys the wood from the place of origin to the country of manufacture supplies a utility of place. The merchant who stores the wood until it is well seasoned supplies a utility of time. The manufacturer who converts the material into tables and chairs supplies a utility of form. Utility, too, may be of a personal character, such as that rendered in the services of an

editor or a professional cricketer. It would be incorrect, therefore, to restrict the meaning of production to the actual making and transforming of goods, for the addition of the other degrees of utility is of immense importance in the present-day world economy.

It follows that the production of an article is complete, not when it leaves the maker, but when it is in the hands of the consumer. The production by a local craftsman of a bespoke pair of shoes requires little in the way of service additional to the actual making operations. But the shoes manufactured in a Northampton factory may have to be carried a long distance before their production has reached its final stage. Thus transport and trading have an important part in the entire scheme of production.

Production and consumption should not be regarded as two entirely opposed and independent acts. It is true, of course, that utility is created in the making and merchanting of a pair of shoes (to continue the same exampie), and that it is gradually destroyed as the shoes are worn. In this sense consumption is the opposite of production. But has one not consumed leather and nails in manufacturing the shoes; coal and machinery in both making and transporting them; boxes, paper, and string in selling them over the counter? Hence, a distinction might be drawn between the act of consumption that is really a stage of production and that which is of a "final" character. Some economists have classified the two types of consumption as "productive" and "unproductive" respectively. But, while the distinction must be noted, the terms should not be taken to indicate a superiority of "productive" over "unproductive" consumption. "Productive" consumption is not an end in itself, but simply the means to the ultimate satisfaction of our wants.

2. THE PRODUCTIVITY OF LABOUR

"Productive" and "Unproductive" Labour.

A somewhat similar distinction is sometimes drawn between productive and unproductive labour. The Physiocrats, a school of French thinkers in the eighteenth century, went so far as to say that agriculture and allied occupations alone were productive, and that all manufacture was unproductive. This was soon recognized, however, to be a false distinction, for the making-up of raw materials into finished articles was evidently no less productive than the winning of the materials from Nature. But economic reasoning had to make a further advance before it admitted the productivity of workers engaged in commerce and transport. It used to be maintained that, as a commodity had not changed in character between entering and leaving a merchant's or carrier's hands, no productive act had been performed. But such a contention led to many inconsistencies. For example, the natives working in a cotton plantation would be described as productive labourers, but the men who transported it thousands of miles would be reckoned unproductive. The drawer of water in an oasis would be termed a productive worker, but the man who carried it for miles into the desert would be deemed to be a non-producer.

Similarly it was argued, and the view is still held in some quarters, that the clerical and administrative staffs of a factory are not productive. This opinion would appear to gain some support from the practice adopted in many factories of drawing a distinction between the so-called productive and non-productive departments. The classification, however, is simply for administrative purposes. No employer would regard his clerks as not playing their part in production; proof of their

indispensability would soon be forthcoming if the clerical departments were abolished. Even the work of addressing labels or keeping the postage book is an integral part of the machinery of production. Production has already been explained to be the creation of utilities, and this definition should dispel the confusion between productive and unproductive labour. If labour creates utilities it is productive; if it adds no utility it is non-productive. Thus, the gathering of blackberries would be termed productive, for the fruit has a greater utility in the basket than on the bush. The persons who transport the berries to the market, those who bottle the fruit or convert it into jam, those who keep the accounts of the transactions, are all productively employed.

Unproductive labour, therefore, is simply effort that fails to render a utility. Digging and filling holes would obviously be classed as unproductive. Strictly speaking, one might also regard as unproductive the labour expended in making an article which turns out to be useless, such as a bridge that collapses as soon as it is put to the test, or the labour which, through misdirection or faulty estimate of the demand, is embodied in articles that perish before they can find a market.

The different forms of labour are sometimes classified as skilled and unskilled, mental and manual, responsible and automatic. The differences, such as exist, are of degree rather than of kind. The boundary between skilled and unskilled work is often shadowy and artificial. One can say that a particular task requires more skill than another, but one seldom finds a man engaged on work that requires absolutely no skill at all. The division, too, between mental and manual labour is misleading, for mental work often requires manual

execution, as in the case of sculpture, while manual work usually entails a certain amount of mental direction, as in the case of bricklaying. Even the operator of an automatic machine is not altogether free from responsibility and conscious direction.

So imperceptibly does one grade of labour merge into the next that no useful purpose can be served by drawing up rigid classifications.

Conditions Influencing the Productivity of Labour.

The productivity of labour varies considerably, partly for reasons inherent in the worker himself, partly because of differences in conditions from one occupation or industry to another.

The principal factors governing the efficiency of the worker may be briefly noted—

(*a*) The efficiency of a worker is influenced to a certain extent by the quality of the stock from which he springs, which in turn is largely determined by conditions of climate and environment outside the individual's control. Physical conditions tend to make the inhabitants of countries in the temperate zones more productive than those living in the tropics. Conditions of breeding, too, have an important bearing on labour efficiency, as can be seen from a survey of different races and even of families.

(*b*) Such attributes as health and strength, intelligence and ambition, judgment and perseverance, affect a worker's productivity. But these qualities can be considerably developed by a proper system of training. Education, both general and technical, is a factor of the first importance in promoting industrial efficiency. Public expenditure on educational schemes is not only

socially desirable, but is also an admirable investment from the business point of view.

(*c*) The conditions of employment also influence the worker's efficiency. If the factory is well built and ventilated, if the heating and sanitation are good, and if adequate rest periods are provided, the effect on output must be beneficial.

(*d*) Labour productivity depends no less on the quality and methods of factory organization. One reason why output in the newer industries or countries is higher than in the old is that the labour is more fully and economically utilized. The need is especially marked where the number of workers is limited. Hence there is a growing demand for "redeployment" in a number of trades in which long-established practices have tended to hinder the attainment of full production.

(*e*) The efficiency of industrial management depends partly on the length of the working day. It is clear that if a man works more than a certain number of hours a day his efficiency is apt to decline, not only during the latter part of the day, but throughout the whole working period. Modern production does not permit of the leisurely methods typical of earlier times. Eight hours in a twentieth-century factory, where never-tiring machinery sets the pace, may involve a greater strain than did ten, or even twelve, hours a century ago.

The wastefulness of a very long working day is now generally recognized. Many firms have found that, within certain limits, a reduction of hours has not been accompanied by a falling-off in output; indeed, in some cases the worker's productivity in the shorter working day has actually been greater than it was before the reduction of hours. Investigations carried out by Government departments have shown similar results.

A shorter working day may be the means of introducing a "shift" system, which, if not carried to the extreme of working by night as well as day, may be beneficial to employers and workers alike. Machinery is liable to become obsolete long before it is actually worn out. By means of a proper shift system, more use can be made of the plant before it is scrapped, and an appreciable saving results. A man's working day is reduced; that of the machine is lengthened. Even if the worker's own productivity should be reduced through his working fewer hours, it is possible that the loss would be more than compensated by the saving in obsolescence charges.

(*f*) The efficiency of the worker is closely bound up with the wages he receives. High productivity is both a cause and an effect of high wages. Up to a point, the more a man can spend on good food and other essentials of life, the greater is his productivity. And the greater his output, the better are his prospects of still further remuneration. High wages accompanied by high productivity are, as a rule, more advantageous to the employer than low wages and low productivity.

There are instances, however, in which an increase in wages or a reduction in hours is not followed by an improvement in efficiency. If a man has been previously earning sufficient to maintain himself and his family in a state of full efficiency, the addition of some shillings to his income may not result in a greater output. In fact, it is possible that, in view of his extra earnings, a man may wish to work for fewer hours than before. Wages and hours are thus seen to be closely related. The worker, instead of buying more goods, might prefer to "buy more leisure." Perhaps, as a result, his productive capacity during the diminished working

day may remain unaffected. But, if he has already reached the point of maximum productivity, a reduction in hours may be followed by a falling-off in his output.

The efficiency of the worker also varies according to the manner in which the wages are spent. Two families of the same size may have equal incomes, yet the respective standards of efficiency be vastly different. The reason may be that for one family the money is put to the best use—nothing is squandered and perhaps a little is saved—whereas in the other family some of the wage is spent on wasteful, if not actually harmful, objects.

Thus, the efficiency of labour depends partly on natural factors, but mainly on conditions that are determinable and are capable of improvement. Efficiency is not purely a personal matter, but is closely bound up with the methods of industrial organization and with the system of remuneration. The wages of labour, which will be more fully considered when we come to deal with the distribution of income, are of the utmost importance in determining the extent and quality of production.

3. THE MATERIAL FACTORS OF PRODUCTION

So far we have considered the human agent of production, to the exclusion of the other factors that contribute to the creation of wealth. Obviously the direction of man would be of little use without the matter and energy supplied by Nature. From the beginning of time the resources of Nature have been used in conjunction with labour for the satisfaction of human wants. But very early in his economic evolution man discovered

that by the use of tools and other artificial means his productive capacity would be greatly increased. Though these instruments came to occupy an indispensable place in the economic system, the resources of Nature still retained their primary importance.

Land and Population.

"Land" has a more comprehensive meaning in economics than it has in everyday language. It is taken to include all the gifts of Nature that are utilized in the production of wealth. Thus, it comprises not only the soil in the literal sense, but the mineral deposits and the vegetable growths that are used to satisfy man's requirements. It embraces climatic conditions, as well as the natural forces, such as light, heat, and electricity. In spite of man's ingenuity and creative abilities, natural gifts still play a prominent part in production, especially in industries such as agriculture, fishing, mining, and lumbering.

Whereas the supply of labour is capable of enormous increase, the supply of land—in the ordinary sense of the term—is relatively fixed. Moreover the produce from a plot of land cannot be indefinitely increased. Thomas Malthus and other economists of a century ago drew very pessimistic conclusions from the rapid increase in population as compared with the limited bounty of Nature. Their belief that population is more prolific than food supplies is true as a statement of tendency, but the history of the last hundred years demonstrates that the genius of man has contrived so far to defeat the "niggardliness of Nature." Land may be limited in extent, but it is not incapable of improvement. Ricardo's well-known phrase, "the original and indestructible powers of the soil," is very misleading. While

it is undeniable that a piece of land, if it is to provide food for man, must at the outset possess some degree of fertility, and enjoy favourable climatic conditions, the actual productivity of the land may be vastly increased by human effort. The soil becomes enriched by a proper rotation of crops, by scientific fertilization and by drainage and irrigation. Land, such as in the Fens, that had hitherto been regarded as unfit for agriculture, has been rendered highly productive. Even conditions of rainfall have been influenced by artificial means.

Improvements in transport, too, serve indirectly to increase the returns from the land. Areas known to be fertile were left uncultivated because they were not easily accessible, or because the expense of conveying the produce to market was prohibitive. With the coming of the locomotive and the steamship, however, such areas were exploited and made to provide for the world's demands. Transport developments and improvements in agricultural science have literally increased the effective supply of land by millions of acres, and there are still large undeveloped tracts of territory that are capable of being developed for the world's requirements.

The Productivity of Capital.

" Capital " is used in so many senses that it is difficult to obtain a definition that is consistent with the various applications of the term. The average person identifies capital with money. But, though money may be used as capital, capital need not take the form of money. The business man would regard as his capital not only the cash in hand and at the bank, but also his stocks, machinery, and office equipment.

Capital consists of wealth, but is all wealth capital? The answer to this question depends on the definition that we adopt. Capital, like wealth, may be viewed either from the individual or from the social standpoint. In the individual sense of the term, capital has been described as that part of wealth from which one draws an income. In the social sense, it has been defined as wealth that is put aside to produce further wealth. It usually happens that the same unit of wealth fulfils both purposes, and in such conditions there is no advantage in drawing a fine distinction. But there are occasions on which wealth yields an income to the individual but adds nothing to the total wealth of the community. For instance, a man draws an income from a loan to a spendthrift, although his money lent is not being employed in a productive manner. The holder of war stock receives his dividends from the State, but there is no productivity of the loaned wealth corresponding to an investment in an ordinary joint-stock company. In fact, the "capital" in these examples has probably resulted in the destruction of existing wealth rather than in the production of new supplies.

Unless stated to the contrary, we shall employ capital in its social sense—namely, as wealth set aside to serve in the production of further wealth. Capital, as thus defined, may take several forms. The part of a crop which the farmer retains as seed for the following year is capital in its true sense. So are the manufacturer's tools and machinery, the stocks and buildings, the money for paying wages, and also the petty cash. The business man regards as his capital the funds available for initiating new enterprises and for taking the inevitable risks. All these forms of capital represent wealth used for the purpose of increasing production.

The Nature of Capital.

Confusion of terms is responsible for much confusion of thought regarding the nature of capital. The fact that some critics object to the payment of interest on capital does not indicate any antagonism to capital itself. As an agent of production its services are evident to all parties. The criticism is directed, not against the material instruments of production, but against the "capitalistic" system whereby they are privately owned and controlled. Opponents of the present system maintain that the power given by the ownership of capital is too great to be exercised by individuals, and that some degree of public control is essential. It is sufficient for our purposes, however, to realize that such objections do not apply to the service of capital as an agent of production, with which function we are mainly concerned.

Capital in some respects resembles land; in other ways it is vastly different. The two are alike in that they are both passive material factors of production, as compared with the active and directive force of labour. Also, capital may be sunk in improving the land until it is impossible to distinguish between the gifts of Nature and the qualities added by man.[1] But their resemblances cannot conceal their essential differences. Land, in the strict economic sense, is a natural factor, while capital is a product of labour. Land is relatively fixed in quantity; capital is reproducible almost to any

[1] Care should be taken to distinguish between the capital spent in purchasing the land and that spent in improving it. A man who acquires a piece of virgin land by purchase regards the income more as interest on capital than as rent of land, even though he does not spend a penny on physical improvements, the return being due entirely to the natural properties of the soil. The land has become "capitalized," to use ordinary business language, but its productive capacity may be no greater than before. See Chapter VIII for analysis of interest and rent.

extent. The natural qualities of land are imperishable, and may actually improve with time; capital perishes sooner or later, and calls for periodical replacement.

The Accumulation of Capital.

If we all spent to the limit of our incomes there would be no savings and no capital. An essential condition to the accumulation of capital is that the community as a whole should spend on its ordinary requirements less than it receives. The familiar statement, however, that capital comes from the surplus of production over consumption is apt to be misleading, for one might gain the impression that wealth saved is not consumed at all. Actually, of course, the savings are not allowed to lie idle, but are usually directed into productive channels. When a person saves money and deposits it with the bank, the wealth is for the most part lent out to manufacturers and others who, presumably, put it to more productive use than is possible for the original saver. In other words, if we regard savings from the standpoint of the community, we see that they do not represent abstinence from consumption, but rather the transfer of the power of consumption from one set of persons to another. The wealth is consumed just the same, but the direction and nature of the consumption are altered. Hence it is not altogether correct to say that capital is derived from the surplus of production over consumption unless we emphasize that consumption is referred to in its narrow " unproductive " sense.

The power of a community to save varies largely with its productive capacity. If, owing to weak organization, or poor natural supplies, or any other reason, a community produces little more than a bare subsistence income, the supply of new capital is necessarily scanty.

On the other hand, a country that is highly organized and well endowed by Nature is able to provide a generous standard of living for the inhabitants, and yet to afford a considerable capital balance for investment.

The accumulation of capital depends not only on the ability, but also on the will, to save. Two persons may have equal incomes and the same number of dependants, but if one has greater foresight and prudence, and a keener sense of family obligations than the other, he will place a stricter limitation on present consumption, and thereby provide more adequately for the future.

The act of saving is automatic with some people, deliberate with others. Those who have very large incomes can hardly help saving; they are able to satisfy all their needs and whims, and still have a sum left over for investment. If the rate of interest were to fall even to zero these people would still save something, because their primary motive is not the desire to gain a further income. Those whose means are not so abundant might still save up to a point independent of the rate of interest, but beyond that point their savings are largely determined by the prospective yield of investments.

Though the rate of interest exercises a great influence over the amount of savings, it is by no means the only consideration. One could argue, in fact, that, in certain circumstances, a rise in the rate of interest would be followed by a fall in savings, and *vice versa*. Suppose that a man wishes to accumulate sufficient means to enable him at a certain age to retire from business with an income of £200 per year. If the rate of interest averages 2½ per cent he will have to save £8,000 to receive the above income. But, if the rate rises to 5 per

cent, he may contend that the required income can now be obtained on £4,000, and therefore cut down his savings by half. This is an extreme example, and in practice would probably be modified by many other factors, such as taxation and the variations in the general price level and therefore in the real purchasing power of money incomes; but it is sufficient to show that the extent of saving does not vary in direct proportion to the rate of interest.

Two further conditions favouring the accumulation of capital remain to be noted. One condition is security of property against abuse and spoliation. The inducement to save is not strong if the government is powerless to maintain law and order, and if a producer therefore cannot be certain of enjoying the fruit of his efforts.

The other condition is opportunity for investment. Consider a person living in the Middle Ages, or in an undeveloped country at the present time. He may have a surplus over the amount required for ordinary consumption, but he finds few openings for remunerative employment of his wealth. There are no banks, no large businesses requiring funds, no joint-stock companies in the ownership of which he can take a small or large share according to his pocket, no facilities of any kind for putting his wealth to advantageous use. But, with the evolution of industry and the growing function of capital, the necessary organization gradually develops, until the man with even the smallest surplus is able to deposit it at interest with his bank, or invest it directly by taking up shares in a joint-stock company. A considerable sum of money under single control can usually be more economically administered and advantageously employed than a large number of small amounts, each under the personal control of its owner. Mammoth

undertakings, such as shipbuilding and railway construction, would be almost impossible were it not for the banking and joint-stock methods whereby comparatively small sums are brought together to provide the necessary funds. The different forms of organization for applying and controlling capital will be examined in the subsequent chapters.

CHAPTER II

THE ORGANIZATION OF PRODUCTION

SYNOPSIS

1. *The Economy of Specialization*

Division of labour is characteristic of modern production; it takes the form of division into whole industries and callings, and of subdivision of these into processes and part processes; localization of industries a territorial division of labour. Conditions determining industrial organization; population and the market, character of the population, amount of available capital, internal conditions and characteristics of a trade.

Benefits of specialization: (*a*) increased output, (*b*) economy of time, (*c*) introduction of machinery following the simplification of processes, (*d*) economy in use of machinery and tools, (*e*) reduction of period of apprenticeship, (*f*) greater proficiency through constant repetition, (*g*) diminution of certain kinds of physical strain. Drawbacks of specialization: (*a*) monotony and narrowing influence, (*b*) immobility of labour, (*c*) loss of personal bond between employer and employed. The extent of specialization limited by small, or irregular, or seasonal, demand.

Localization of industry; physical and climatic causes; importance of a commodity's portability; economy of territorial specialization; the principle of "comparative costs"; cumulative effects of localization: adaptation of means of transport and other external economies, market for specialized skill, "industrial inertia." Objections to localization: liability of district to acute distress in time of depression, danger of entire dependence on foreign countries for vitally necessary articles. Counter-tendencies to localization: decentralizing influence of cheap transport, heavy rent and rates in thickly populated areas, transmission of cheap electrical power over long distances.

The law of increasing returns or diminishing costs; different application of the law. The law of diminishing returns or increasing costs: application to manufacture and the supply of services as well as to agriculture; the two laws compared; diminishing returns a short period result, increasing returns the general rule in the long run.

2. *Enterprise and Risk-taking*

Evolution of the middleman into the business leader; management distinguished from enterprise; the "captain of industry" not always an employer of labour; nor necessarily the supplier of capital; overlapping of functions of providing enterprise and supplying capital. The risks of industry; legitimate and beneficial risk-taking; useful functions of the speculator in reducing fluctuations in prices and in adjusting supply and demand; abuses of speculation. Insurance as a means of spreading the risks of industry over a large number of persons; contracts as a means of concentrating the risks at a few points.

I. THE ECONOMY OF SPECIALIZATION

The Division of Labour.

In the early stages of economic development men engaged in a far greater variety of tasks than they are called upon to perform nowadays. A family between them might build their own home, grow their own food, make their own clothes, and be almost independent of outside supplies. To-day such a condition is practically impossible. Our wants have grown so much that the whole world has to be searched to satisfy them. Even if our wants were as meagre as those of our remote ancestors, the enormously greater population could not possibly be supplied by the elementary methods that they found adequate. People no longer provide everything for themselves, nor do they usually produce a complete article by their own efforts. Instead the work is divided into numerous tasks, which are shared out to such a degree that the majority of men now spend their working lives in performing a specialized group of operations. This apportionment of functions, to which economists have applied the term "division of labour," is one of the chief characteristics of the modern industrial system.

Division of labour is frequently taken to imply the

specialization of individuals within a single firm, but the principle is of much wider application. The splitting-up of the members of the whole community into various occupational groupings is in itself an important stage in the division of functions. Very early in the evolution of industry there was a separation between the obtaining of raw materials in their natural state and the making-up into finished commodities; in economic terms, there was a division between the "extractive" and the "constructive" industries. Subsequently emerged the commercial class, composed of the merchants, the transporters and the bankers. To these must be added the workers who render a direct service to the consumer, such as surgeons and professional entertainers, as well as the growing class of public employees, such as teachers and judges. This elementary division of labour into whole industries and callings is often taken for granted, but it should not on that account be overlooked in an analysis of the different forms of specialization.

In the development of industrial organization there soon occurs the division of whole industries into groups of complete processes. The clothing industry, for example, splits up into many distinct branches. The spinning of yarn, the weaving of cloth, the making of clothes, the selling of the product, are now separate trades that previously were carried on in one establishment.

Ultimately processes became subdivided into part processes, and the specialization went on until a man might do nothing more than rivet a bolt or raise and depress a lever. Whereas the worker in the early stages saw the material assume shape and become a finished product before it left his hands, the individual artisan of to-day may perform but a minute operation in the production of a commodity, which passes through scores of hands before it is ready for the consumer.

Still another type of division of labour is afforded by specialization of entire areas. The wool textile industry, for example, is concentrated in the West Riding. Even within the district the towns show a further specialization. Bradford, using the finer and longer-staple wool, concentrates on the making of worsted cloths ; the Colne Valley, employing the shorter-fibre wool, manufactures tweeds ; Dewsbury, depending largely on rags and clippings, re-manufactures them into low-grade cloths. Similarly, the cotton industry, centralized in Lancashire, is divided into the spinning and weaving areas, while there is still further subdivision into the coarse and fine spinning districts. Localization of industry presents some special problems, which will come up for further consideration later in the chapter.

Conditions Governing Industrial Organization.

The organization of industry in general and of trades in particular depends on several conditions, prominent among which is the size of the market. If the population is large, or if there is an extensive foreign demand, it is possible to produce on an elaborate scale and secure valuable economies. If, however, the market is restricted, the extent to which the division of labour can be carried is correspondingly limited. In this respect we are better off than the people of centuries ago. Apart from their deficiencies in the technique of production, their demand for goods, compared with that of to-day, was so small that production was necessarily on a moderate scale. The growth of population has on the one hand provided an increased market, while it has on the other facilitated the division of labour which is so fundamental to efficient production.

The character, as well as the size, of the population

influences the state of industrial organization. China has a large population, but the individual wants are relatively few and simple. In Great Britain the population is only a tenth of that of China, but the general standard of life is higher, and therefore the number of commodities required by the average individual is considerably greater. Thus, a country with a small population may have a relatively advanced industrial organization, which becomes even further developed if, in addition, the home manufacturers cater, as they do in Britain, for a large foreign market.

The state of industrial organization is also affected by the amount of available capital. Operations on an extensive scale usually involve a heavy capital expenditure. The greater the savings of the people, or the greater the facility of obtaining funds from foreign investors, the more practicable it is to secure the benefits of large-scale and efficient production. In addition to capital supplies there should be an effective banking and credit system, whereby widely spread funds are brought together and directed into productive channels.

The internal conditions and characteristics of a trade necessarily influence its organization. Some trades reach the point of maximum efficiency at an earlier stage than others. For example, the growing of vegetables does not lend itself to the same complex methods as the production of steel. Nor, where the service is essentially of a personal kind, such as dentistry or hairdressing, can a high degree of specialization be expected. Hence, in the following account of the division of labour, it should be borne in mind that the quality of the organization varies with the type of industry as well as with the nature of the economic environment. The advantages that are prominent in one industry may be entirely lacking elsewhere.

Benefits of Specialization.

The economies of specialization may be regarded from the standpoint of the industry as a whole, and from that of the specialized worker himself. It is necessary to draw this distinction, for although specialization is, in general, of mutual benefit, there are occasions on which advantage to the industry is secured at the expense of the worker. The general industrial benefits may be enumerated first:

(*a*) The most obvious gain resulting from division of labour is found in increased output, which, together with the other economies to be noted, results in lower costs per unit. Suppose that a dozen men in an elementary economic system were engaged in making clothing, each man making a garment from beginning to end. The total output per week might be (say) thirty-six garments. Suppose now that each man was given a specialized task for which he was best equipped. The number of suits produced per week might in consequence be increased to fifty. It should be understood, however, that the extra output is not due to greater individual effort on the part of the workers, but is attributable to the improved economic organization of the industrial group.

(*b*) As each worker specializes on the task for which, either by nature or training, he is best fitted, there is a distinct saving in time. A man is enabled to work continuously on a single operation without having to change a set of tools, or move from one part of the factory to another. A skilled worker is able to devote his whole time to the performance of a task without having to spend part of his energies on the less skilled duties. Incidentally, work would thereby be provided for those comparatively unskilled operatives, who might otherwise find it impossible to secure employment.

(*c*) Specialization tends to simplify the individual

operations, and prepare the way for the introduction of machinery. Consequently there is increased scope for inventions. On the other hand the greater use of labour-saving devices is liable to result in unemployment in particular trades and to cause some social loss, even though to the community as a whole there is a net economic gain.

(*d*) There is an appreciable economy in the use of machinery and tools. In the above instance of the dozen men, each making garments from beginning to end, a complete set of implements would be required for each individual. The scissors would be lying idle while a man was stitching the pieces together, and no use would be made of the sewing-machine while the garment was being cut out. On the introduction of a suitable division of labour, the implements would be used continuously, and it would be no longer necessary to have a complete set for each workman. The capital expenditure per unit of output, including not only that on machinery, but also on floor space, lighting, etc., might be reduced by a considerable amount.[1]

A further saving is effected in that the most delicate and expensive machinery is entrusted only to the skilled operatives, thus preventing undue damage and reducing the loss on scrapped material.

Bound up with these general industrial economies are the advantages accruing mainly to the workers:

(*e*) When a man has to perform the whole of the operations involved in the making of a product, a long

[1] It is true, of course, that there would be a greater wear and tear of tools and machinery that were used almost without a break. But the cost of the extra depreciation would usually be more than balanced by the greater service obtained from the instruments before they became scrapped as obsolete. See page 65.

period of training is usually essential. A five or seven year apprenticeship used to be the general rule, but now it is not so common. The present industrial methods are such that a youth can learn a specialized task in a period measured by months rather than years. It is true that he is not a master of his trade, but the fact must be faced that the modern industrial system provides a diminishing number of openings for the all-round craftsman who wishes to make use of all his abilities.

(*f*) By constant performance of a task, the worker becomes more proficient in his particular line. "Practice makes perfect." His greater output, besides benefiting the industry, enables him to secure a better remuneration, for, as we shall show later, income depends largely on productivity.

(*g*) To the extent that machinery performs arduous work, such as lifting heavy weights, the worker is relieved of a certain physical strain. It does not follow, however, that tending a semi-automatic machine is necessarily a light duty. As often as not the machine sets the pace, and the worker is, to a large extent, driven by the machine. Some workers are so constituted that they are not affected by the constant repetition of a single operation, but others, whose nature is more sensitive, soon feel a revulsion against their wearisome task.

Drawbacks of Specialization.

Even while noting the benefits of specialization, we have had occasion to refer to some of the drawbacks. The following disadvantages, though they seem to affect the worker more particularly, have their ultimate incidence on the efficiency of the industry as a whole :

(*a*) The most obvious objection to intense specialization is the extreme monotony of performing, week after

week, a highly subdivided task. The absence of any creative feeling, and the removal of the remotest sense of responsibility, except for a dwindling proportion of the workers, serves to cramp a man's outlook and initiative, and to reduce him to an automaton little removed from the machine he tends. The industrial fatigue thus engendered may actually shorten his working life.

The ill-effects of the system may be observed after factory hours. Would-be reformers often forget that many of the social abuses, such as gambling, are as much as anything a form of escape from the dull working conditions in which the men and women spend the greater part of their lives. Intense specialization, therefore, has to meet criticism from both the industrial and the social points of view.

(*b*) The greater the specialization, the greater, as a rule, is the immobility of labour. The fact that a man is trained only for a single group of operations prevents him from taking on some other work if conditions in his own trade become depressed. The problem of dealing with unemployment is thereby rendered more difficult. It has been urged, however, on the contrary, that the extreme subdivision of tasks tends to simplify the work to such an extent that sectionalized operations in one industry resemble more or less those in another. The tending of different kinds of automatic machinery, even though they are found in very dissimilar trades, does not call for a lengthy training. And even in the skilled departments mobility would not necessarily be hindered. For example, if the watchmaking trade were for the time being over-supplied with skilled craftsmen, the workmen might secure employment elsewhere in (say) the making of scientific instruments.

All things considered, it is probable that specialization impedes rather than promotes the mobility of

labour; that the majority of specialists are compelled to remain within the narrow circle in which they have been reared and trained. This conclusion is well supported by statistics and reports on unemployment in recent years.

(*c*) Extreme division of labour is naturally associated with large-scale production, and this form of organization is, more often than not, in the hands of a joint-stock company. Individual ownership and direction of a business may have its failings, but it permits of an intimate bond between employer and employed that is rarely possible when the ownership is scattered among thousands of shareholders. The proprietors of a company, varying widely in nature and outlook, cannot be expected to have the same personal interest in the welfare of the employees as the owner who is on the spot and, perhaps, works alongside the men he employs. It is true, on the other hand, that a small master may be a tyrant while a large company may offer very congenial conditions. Some of the most attractive factories, from the workers' point of view, are those controlled by the great corporations, which provide good working conditions and spend large sums on welfare and recreational amenities. Nevertheless, the old personal bond between master and man had certain advantages that are lacking in the systems where the shareholders take the place of the individual owner.

Limits to Specialization.

Division of labour is rarely advanced to the degree that is theoretically possible. Extreme specialization is the accompaniment of a very large output, but if the demand is comparatively limited the supply must be adjusted accordingly. Thus, in a given area, the demand for bespoke suits and overcoats might not be more than

a hundred per week. Even if a single firm were called upon to produce all the clothing (a very unlikely event), it would not be profitable to carry the specialization, and to purchase the appropriate machinery, beyond a certain point. If the demand were greater, a special cutter might be employed for overcoats, another for coats, and so on. As it is, one man has to cut the several types of garment. Further, if additional supplies could not be disposed of unless the price were considerably reduced, it might not be in the interests of the manufacturer to increase his output. He would be induced to augment his scale of production only if he thought the extra economies and greater sales would more than balance the reduction in the selling price.

Similarly, if the demand were spasmodic or liable to great fluctuation, the producer would not be tempted to develop the organization of his business to the theoretical maximum. No doubt ice skates could be sold at a much lower price than at present, were the demand not so capricious, and could manufacturers arrange for a more constant market. Even articles that have a regular seasonal demand are not likely to be as economically produced as those which are required constantly all the year round. The supply of chocolate, for example, is more efficiently organized than that of ice cream.

The Localization of Industry.

As previously mentioned, the division of labour is found not only among individuals, but also among districts, and even among countries. Thus, in England entire areas are devoted mainly to the manufacture of cotton and wool textiles, pottery, steel goods, and other specialized products. England, as a whole, concentrates on manufacture, while South America is largely

agricultural. In the same way as the efficiency of a factory is increased if each group of men is apportioned to a suitable task, so the national and the world economy is advanced if entire districts specialize in producing those commodities for which they are most suited.

Though there are certain instances of districts being selected more or less arbitrarily for the establishment of an industry, the territorial division of labour has been mainly determined by the physical character of an area, and by the special transport and commercial facilities that may have sprung up in the course of a country's economic development. The most evident cause of localization lies in natural advantages. A gap in the hills, or the junction of two navigable rivers, is liable to form a trading centre. The presence of valuable mineral deposits, or of sources of power, such as running water, tends to localize the industries dependent upon them. Some articles require favourable climatic conditions (e.g. a damp atmosphere) for their manufacture, and (unless the conditions can be artificially reproduced) the industry tends to settle where the environment is suitable.

The bulk and portability of an article used in production help to determine the degree of localization. If a necessary material is heavy in proportion to size, and especially if much of it is wasted in the process of manufacture, we would expect the industry to be carried on as near to the source of supplies as conditions permitted. The cost of transporting coal, for example, is a serious item, and thus in several industries it is found cheaper to convey the raw materials to the coal than to transport the coal to the raw materials. Hence the intense localization on the coal fields.

It may be asked, why does a certain district specialize in one industry when its natural advantages seem to

qualify it also for another ? One may equally ask, why does Britain import wheat from abroad when she could grow more wheat herself? The answer to such questions is supplied by the economic gains attendant on division of labour in general. A business man employs a typist, though perhaps he himself can type the correspondence with greater efficiency. A professor of botany employs a gardener, though the plants would be better looked after, perhaps, if they received the professor's personal care. We say, in ordinary language, that it would not be worth the business man's or the botanist's while to perform these less important tasks; their working time is limited, and they specialize in the tasks that are relatively of the greatest advantage. Similarly, one district or country may be qualified to produce a certain class of goods besides the one in which it has specialized. It prefers, however, to devote its energies to these goods which it can produce at relatively lower costs.

This principle of "comparative costs," which is simply a special application of the theory of division of labour, is responsible for the apportionment of various industries among different geographical areas. This country could, if she wished, grow wheat in larger quantities, but she finds it more advantageous to concentrate mainly on manufacture. Possibly the Clyde Valley could produce textile goods nearly as well as Lancashire, but it finds the shipbuilding and steel trades more suitable. If each locality specializes in those branches of industry for which it is best fitted, the production of the community as a whole is at its highest point. In practice we may never reach this theoretical maximum, because of physical obstacles, government restrictions and the like, but the general tendency should not on these accounts be overlooked.

Once localization begins, it gathers momentum and new conditions arise to fix the industry more firmly than ever. The effects of the original settlement of an industry become, in turn, the causes of still further concentration. For example, the means of transport and commerce are specially adapted to the needs of the district. New railway tracks are laid down, while ship canals may be constructed. Exchanges, research centres, and other organizations of mutual advantage spring up. Subsidiary industries also develop, providing for the needs of the main industry in the area. Thus, textile machinery is produced chiefly in Lancashire and Yorkshire, hosiery machinery in Leicester, agricultural implements in Grantham and motor accessories in the Midlands.

In an area in which an industry has settled itself there is more scope for specialized skill. Workers possessing the requisite ability move to the district, while new employers find it easier to secure labour by starting a factory on the spot than by commencing operations in another part of the country. Localization also promotes the mobility of labour within the trade. When a large number of works of a similar character are situated in a single area, vacancies are filled with greater ease than is possible where the industry is scattered.

It sometimes happens that an industry is continued in a district long after the original causes of specialization have disappeared. The Potteries provide an instance of this " industrial inertia." The local supplies of fine clay, which were at first responsible for fixing the industry in that area, are now almost negligible; the industry, depending on its specialized labour and capital, its coal supplies, and its wide reputation, is content to carry on with imported fine clay and other materials.

Objections and Counter-tendencies to Localization.

Like specialization among individuals the territorial division of labour is not without its drawbacks. A district that is mainly dependent on a single industry is liable to acute distress if conditions in that industry become seriously depressed. The people of Lancashire suffered great hardship when cotton supplies were cut off during the American Civil War. Had the industry been more widespread, the loss of trade would have been just as severe, but the burden would have been distributed over a larger area. Similarly, a country that has become accustomed to depend on another for necessary articles of general consumption finds herself in great difficulties if for some reason the supplies are withdrawn. Thus, many people urge that Britain should never allow her food production to fall below a certain level, for, in the event of war, imports are liable to cease, or at least to be dangerously curtailed.[1]

A few counter-tendencies to localization remain to be noted. We have observed that transport facilities help to fix an industry in a particular area. But the development of a cheap and efficient transport system may exercise a decentralizing tendency. Iron goods from the Continent compete in England with the products

[1] Such advocates do not necessarily maintain that it would be in the strict economic interests of a country like England to devote a large share of her energies to the growing of food-stuffs, for, as we have shown above, the maximum economic benefit is obtained when specialization is carried to the utmost degree. It is contended, however, that the immediate economic loss involved in a subsidy (for that is what the diversion of resources implies) would be more than offset by the greater security thus provided. The argument, in effect, is that the subsidy is of the nature of an insurance premium against the risk of being deprived of food in time of war.

of our own foundries; foreign textiles contend here with the output of Lancashire and Yorkshire. A further decentralizing factor, coupled with efficient transport, is the high overhead charges of the town compared with those of the country. Many large firms have moved their works from London and other industrial centres to places a few miles down the railway line or arterial road, where rent and rates are much lower. Finally, there is the influence of cheap electrical power, which can be carried fairly long distances at a low cost. Whereas the old factories were usually built on or near the coalfields, the owners of new works are not so restricted in their choice of an appropriate site. It may be that we have passed the stage of localization at its highest point, and that industries are already becoming more widely diffused.

Increasing Returns.

We are now in a position to formulate the tendency known in economics as the law of increasing returns or diminishing costs, which is said to operate when an increase in the supply of a commodity is attended by a fall in the unit cost of production. The law has several applications. If a business is not working at full capacity, its overhead charges have to be borne by a relatively small number of products, and are therefore heavy in proportion to each unit of output. If the establishment is making full use of its resources—for example, utilizing the floor space to the full and keeping its employees constantly occupied—it spreads the "on-costs" over a larger output, and thereby effects a reduction in the net costs per unit.

Even if all the firms were working to maximum capacity, there would still be dissimilarities in the

comparative costs of production owing to the differences in the size and technique of the various establishments. A large concern may adopt a superior arrangement of the workshops and of the machinery, and effect a better specialization of the labour employed, thus leading to "economies of scale" that cannot possibly be shared by the smaller firm, even if the latter is taking the maximum advantage of its own resources.

The above examples might be applicable even if there were no advances in the technique of production. One firm will always enjoy lower costs than another owing to superior internal organization. Though the various devices are known to, and perhaps are used by, all firms, the cost per unit of output will vary from factory to factory according to the efficiency of the management. But actually, of course, inventions and new methods are constantly being discovered, and the firms that first make use of them enjoy economies in production that fall in a different category from those due primarily to superior organizing ability.

Diminishing Returns.

If a man devotes a dozen hours to the cultivation of vegetables on his allotment, and gets (say) fifty cabbages for his labours, it does not follow that doubling the number of hours applied to the same piece of land will increase his yield in proportionate measure. Possibly the further dozen hours will increase his output by only thirty cabbages. For additional effort of the same intensity the man receives a relatively smaller yield.

This is a very simple illustration of the law of diminishing returns or increasing costs, which is said to operate when an increase in the supply of a commodity is accompanied by a rise in the unit cost of production.

Diminishing returns are most evident in agriculture and other extractive industries, in which natural supplies play an important part. Up to a certain stage there may be increasing returns for each unit of labour and capital applied to a piece of land, but after that point the returns show a tendency to decline. This tendency may be, and usually is, offset by the employment of more scientific processes and an improved organization. Thus, the farmer may resort to artificial fertilizers and to a superior rotation of crops, as well as to co-operative methods in the purchase and use of machinery. Nevertheless, the tendency to diminishing returns is present, whether it is permitted to work itself out or not.

Though it is easier to find illustrations of diminishing returns in industries such as agriculture, it is a mistake to suppose that the law does not also apply to constructive industry. Where a manufacturer, aiming at full efficiency, has planned out the works in a most scientific manner, has utilized every yard of floor space, has subdivided the various tasks to the utmost degree, and has taken every precaution to reduce waste to the minimum, he may find that to produce an extra number of articles entails not diminishing but increasing costs. It may be necessary to build further departments, which for the time being are only half occupied, thus involving relatively high overhead charges. He may acquire additional machinery which he cannot keep constantly running. And it may happen that the manufacturer, though he has successfully managed the concern until now, does not possess the capacity to conduct a larger business with equal success. For such reasons the additional returns tend to diminish, or, in other terms, the unit cost of production tends to rise.

The liability to diminishing returns may be observed

in other departments of productive activity. For example, the proprietors of a newspaper might contemplate an increase in the number of pages, thereby securing a greater revenue from advertisements. But the project might involve such considerable expenditure on new equipment and extra space that the net additional proceeds would show a less than proportional return to the outlay. Similarly, in the transport services, an engine of any description cannot, as a rule, be invested with twice the pulling capacity or speed merely by doubling the outlay on fuel.

No essential difference, therefore, exists between the applications of the laws of non-proportional returns in extractive and constructive industries respectively. In agriculture the limited bounty of Nature, together with the rapid growth of population and the corresponding demand for food-stuffs, causes the tendency to diminishing returns to be relatively pronounced. In manufacture, on the other hand, the ingenuity of man finds more opportunity to display itself, while the products, being far more varied than those of agriculture, and therefore not demanded in the same intensity, do not reach the point of maximum returns at such an early stage.

2. ENTERPRISE AND RISK-TAKING

The Business Leader.

When men produced everything for themselves there was, of course, no need for exchange. With the growth of a division of labour, however, a system of trade became essential. Specialization would be purposeless without some means of exchanging one's goods for those of other producers. In the early stages of trading, a man would do his own marketing, but, with the growing

complexity of the economic structure, a new class of specialist, the middleman, gradually emerged. The coming of the merchant allowed the craftsman to devote all his time to the making, as distinct from the selling, of goods. In time the middleman went beyond his original function. Besides buying and selling, he took on the work of *organizing* some of the stages of production. Thus, in the cloth industry of a couple of centuries ago, the merchant would buy the wool, employ spinners working in their own homes to convert it into yarn, have the yarn woven into cloth, and continue to direct the production until the product was ready for sale. Because of his advantageous position the merchant would probably be able to secure materials and dispose of the finished goods on better terms than the domestic worker.

As the sources of the raw materials and the market for the products extended farther afield, the middleman assumed greater importance. He became more than ever an organizer of industry. He would study the requirements of consumers, and then set the wheels of production in motion to meet the demand. He would bear greater risks than the actual makers of the goods, especially where he was catering for a future, and therefore uncertain, demand. The greater his foresight and the more skilled his judgment, the more profitable would be his undertakings. But he was no less liable to make heavy losses, often for reasons which lay beyond his control.

The organization of industry has come to depend very largely on the "captain of industry," or "entrepreneur," or "business venturer," as he is variously called. He may or may not be a direct employer of labour. In any case it is necessary to distinguish him from the ordinary salaried manager or supervisor,

whose services are akin to labour. Management and enterprise may, indeed, be vastly different things. Nor must he be identified too closely with the capitalist. The provision of capital is not the primary function of the entrepreneur. In practice, however, it is not always easy to draw a clear dividing line between the capitalist and the business leader. The one who supplies the capital necessarily participates to some extent in the risks of the venture, while the one who is directing the fortunes of the business almost invariably invests some capital. We shall see later, when considering the distribution of income, that interest of capital and profits of enterprise overlap to a large extent. It is easier to make a rough distinction between the *functions* of supplying capital and providing enterprise than it is to demarcate between the capitalist and the venturer as individuals.

Risk-taking and Speculation.

The risks of industry are of infinite variety. Some contingencies, such as a war or an earthquake, have a wide incidence. Other risks bear more heavily on particular industries in that they are specifically related to the products concerned. Where the demand is irregular, and especially where an untried and unfamiliar product is being marketed, the business man must necessarily take some risks. Even where the dealer makes an estimate based as far as possible on previous production and sales, a change in fashion may upset all his calculations. On the supply side, too, there may be considerable uncertainty, for a manufacturer is usually unaware of the aggregate production of all his rivals. It is one of the defects of our specialised system that there is rarely any co-ordination of output between competitive

firms "Over-production" is not an infrequent occurrence, and, partly for this reason, manufacturers are often impelled to enter into some form of association.

Some risk-taking is inseparable from economic development. The building of railways to build up new lands, the placing of a new serviceable article upon the market, the experimenting with new processes of manufacture, are all instances of risk-taking that are essential to progress. These legitimate forms of enterprise are sometimes contrasted with speculation. But some forms of speculative enterprise have a certain justification. For example, suppose that a trader, with his skilled knowledge of the market, foresees a scarcity of wool in the coming season, and expects in consequence a rise in price. He buys up stocks now in the hope of selling them later at a good profit. Other dealers do the same, and prices rise to a certain extent as a result. Consumers, therefore, reduce their purchases, while producers endeavour to increase their supplies. Eventually, when the time for the predicted shortage arrives, it is found that the stocks are not so depleted as was anticipated, and that the prices have not risen to the extent that the dealer reckoned upon. Thus, the operations of the speculator have helped to stabilize supplies, and to smooth out the fluctuations in the price of wool.

In a simiiar way, if the speculator predicts a glut on the market, with its attendant low prices, he will sell now. Prices will fall, consumption will be stimulated, and production will be discouraged, with the result that stocks on the market will not be so plentiful, and the price will not be so depressed as the speculator expected. These "dealings in futures," therefore, serve a useful purpose in so far as they bring about a quicker adjustment of supply to demand, and prevent undue fluctuations in the market price.

But much speculation is not of this innocuous character, and is apt to degenerate into sheer gambling. The profits of skilled dealers tempt people with less training and ability to dabble in such transactions, sometimes with disastrous results both to themselves and to the industry as a whole. The position is even worse when speculators deliberately manipulate the market in such a way as to cause either a shortage or a glut, when, as the case may be, they sell out their accumulated stocks at high prices or buy back at abnormally low prices. These forms of risk-taking, however, must be distinguished from genuinely productive enterprise, without which modern industry could not be carried on.

Insurance and Contract.

It is impossible to prevent many of the contingencies that arise in the ordinary way of business, but it is often found practicable to mitigate the serious consequences by resorting to the device of insurance. Premiums are paid by the participants in an insurance scheme on the principle that the funds provided by the many will be sufficient to compensate for the losses incurred by the few. It is found from experience that a given contingency occurs in a fairly constant ratio, and actuaries are able to work out the premiums with remarkable accuracy. We know, for instance, that the percentage of fires to the number of firms in a particular industry remains more or less the same throughout a long period. A manufacturer pays his quota towards the insurance fund in the knowledge that, should a fire break out on his premises, he will not be out of pocket as a result. Similarly, a manufacturer of straw hats may insure against a wet summer, or a maker of raincoats against a dry one.

While the practice of insuring against emergencies that can be estimated is rapidly growing, there will always be some risks that are beyond calculation. The merchant, who agrees to supply a quantity of goods at a certain definite price three months ahead, in the expectation that he will, before the time for delivery, obtain supplies at a lower figure, cannot take out an insurance policy to cover losses if his expectations are not realized. The shopkeeper cannot insure against the contingency of a competitor opening next door, nor against the possible depreciation of his stocks. The practice of insurance, while it is of great service in modern industry, has but a limited application, and the incidence of most business risks, therefore, must be borne by individual firms.

A device of a different kind for coping with the risks of industry is provided by the system of contracts. A manufacturer enters into an agreement with another to supply a certain quantity of goods or to buy a given amount of materials at a fixed price. He can then engage in his proper activities, free from the worry of finding a market or from the risk of an increase in the cost of materials. Whereas insurance *spreads* the risk over a large number of persons, the use of contract *concentrates* the risks at a few points. Insurance is comparatively restricted in scope, but the method of contract is found in practically all branches of industry.

The wool textile industry provides a good illustration of this concentration of risks. The small shopkeeper or the tailor is not expected to keep a large range of cloths, and run the risk of the materials being unsold. He is provided with ranges of patterns by manufacturers (or by middlemen), who undertake to supply the materials at a specified price. But the manufacturer

may want to safeguard himself against a rise in the price of yarn, and therefore contracts with a spinner to be supplied at a definite price with all the yarn that is likely to be needed during a certain period. The manufacturer is thus left free to carry on his business as if the risk of a rise in the price of yarn did not exist. The spinner in turn may shift part of the risk to the dealer who supplies him with raw wool. Similarly, at the other end of the chain, the sheep farmer may not be prepared to take the risk of a fall in the price of raw wool, and is glad to enter into an agreement with a merchant, whereby the latter undertakes to purchase the wool crop at a certain price, no matter what the market conditions may be on the date of delivery. Thus, by means of contracts, many of the risks attending a business are shifted forward from the sheep farmers, and backwards from the manufacturers, on to the shoulders of the merchants, who, by their knowledge of the market and their skilled judgments, help to maintain an even flow of production.

CHAPTER III

THE CONTROL OF PRODUCTION

SYNOPSIS

1. *The Unit of Business Control*

Persistence of the small firm in certain trades; advantages of the small business: (*a*) personal supervision, (*b*) personal reputation and goodwill, (*c*) ability to cater for limited and specialized market, (*d*) adaptability to changes in demand, (*e*) ability to benefit from general industrial organization. The joint-stock company; specially suited to modern large-scale production; importance of limited liability; significance of distinction between capital ownership and capital control; liability to abuse. The co-operative society; producers' and consumers' co-operation; comparison with the joint-stock company; advantages and limitations of co-operative ventures.

External economies, consisting of those benefits which arise from the general organization of an industry; internal economies, consisting of those advantages which are experienced by particular firms, and are due to individual initiative and skill; internal economies further classified as technical and administrative. Advantages of the large business: (*a*) scientific specialization of labour, (*b*) economy of capital and ease of obtaining credit, (*c*) economy of material, power and fuel, (*d*) economy of buying and selling, (*e*) ability to engage in advertisement, experiment and research, (*f*) resistance in times of depression.

2. *Competition and Monopoly*

Forms of competition between buyers and between sellers. Hindrances to perfect competition: (*a*) force of custom and habit, (*b*) immobility of labour and capital, (*c*) ignorance, (*d*) large initial capital, (*e*) monopoly. Industrial combination; "horizontal" and "vertical" integration; motive underlying combination may be efficiency or monopoly, or both.

Types of monopoly: natural monopoly, legal monopoly, including rights granted by the State in the interests of technical economy, and monopoly resulting from industrial combination. Monopolistic structure; agreements as to price and territory; the Cartel, an association of semi-independent firms, which

dispose of their goods through a central sales bureau ; the Trust, a more closely amalgamated organization ; comparison with the Cartel.

Advantages of the monopolist : (*a*) co-ordinated and more regular production, (*b*) economy in securing business, by reduced costs of advertisement and smaller staffs of salesmen and travellers, (*c*) elimination of " cross-freights," (*d*) utilization by the combined firms of patent rights, special processes and other properties, formerly owned by individual firms. Criticism of monopoly ; opposition from manufacturers who object to the unfair methods sometimes adopted ; opposition from the public who complain of the high prices usually charged, and of the policy frequently practised of artificially restricting supply in order to force up the price and profits ; the problem of controlling monopolies.

I. THE UNIT OF BUSINESS CONTROL

In this chapter we shall continue our survey of the organization of industry, making special reference to the various units of business control. Starting with the small firm, we shall examine the different types of industrial structure, and observe in what manner the principle of competition is being modified by the growing tendency to combination and monopoly.

The Small Business.

The oldest unit of industrial enterprise consists of the " one man business," which, despite incessant competition, is still common. Though small businesses often grow or become merged into large corporations, new firms arise to take their place. It was confidently predicted by many economists half a century ago that, in view of the economies of large-scale production, and the consequent amalgamation of firms, the number of small businesses would so rapidly decline as to become almost negligible. While it is true that the scale of production has increased, and that industrial combination has proceeded apace, the small firm is still an important feature in our general economic organization. In

some industries, such as heavy engineering and shipbuilding, the production is almost necessarily on a large scale, and the small firm, where it exists at all, has to face serious disadvantages. But in other trades the conditions are more favourable to the small business, and may even be such as to impose restrictions on the size or the efficiency of the large competitor.

(*a*) The most obvious advantage of the small manufacturer or merchant lies in his personal supervision of all the work performed in the establishment. The director of a large firm cannot be expected to give close attention to details, while the salaried managers may not be deeply involved in the success or failure of the undertaking. The small employer, on the other hand, has a greater interest in the efficient conduct of the business, and is more likely to give it his undivided attention.

(*b*) In trades in which the demand is localized the personal element may be a valuable consideration. The small man may acquire a reputation in the district for good quality and service, and be difficult to dislodge from his position. A small druggist, for example, may successfully carry on his business despite the competition of a spacious multiple drug store across the way. A small shopkeeper can frequently cater for the individual requirements of customers better than a large emporium, which, though it carries an immense stock, provides for the requirements of the multitude rather than for the special tastes of the few.

(*c*) In the making of goods for which there is a limited demand, the small firm is in an advantageous position. The production of hand-woven and hand-painted fabrics, for example, is almost invariably on a small scale. Where the hand-made article compares favourably with the machine-made product, the position of the small firm is

even stronger. For instance the small firms in the Black Country, engaged in producing hand-made chains and bolts, compete successfully, by virtue of the high quality of their product, with the large factories which turn out similar types of goods. Production, too, of " bespoke " articles is unsuited to large-scale organization. In tailoring and millinery the small business will hold its place so long as people wish to retain a certain individuality in dress.

(*d*) Where, owing to the vagaries of fashion and similar influences, the demand for a commodity is liable to serious fluctuation, the owner of a small business is often in a better position than his large-scale competitors. He can adapt his establishment to provide for new requirements more quickly and economically than firms that have sunk enormous capital in expensive plant, which can be diverted to fresh uses only with great difficulty. An irregular demand is not conducive to the standardization of products and methods usually employed by the large firm, and thus gives an opportunity to the comparatively adaptable small business.

(*e*) The small firm has benefited, and to a certain extent has had its position even strengthened, by general improvements in the organization of an industry. Thus, in a few trades it is possible for the " waste " products of small businesses to be purchased by other firms which specialize in converting the hitherto valueless scraps into marketable products. The tailor, for example, is able to dispose of his " clippings " to dealers, who send them to be re-manufactured. In the supply of power, too, the small man is not always at a serious disadvantage. Electricity can be conveyed long distances at little cost, and special rates can be obtained when it is used for industrial, as distinct from ordinary domestic, purposes. In agriculture and a few other

industries the practice of co-operation in purchasing supplies and machinery and in marketing the product has improved the status of the small man. Particularly on the Continent has the agriculturist benefited from joint purchasing and selling.

The very success of the small business may cause it to grow beyond the control of one man. For its further development capital may be sought from outside. Thus, the " one-man business " may grow into a partnership, under which a small number of people combine their efforts as well as provide the capital. Outwardly there may be little difference between the new and the old business. But if a member becomes merely a " sleeping partner," that is one who supplies capital but takes no actual part in managing the concern, his position begins to resemble that of the shareholder in the ordinary company.

The Joint-stock Company.

The joint-stock company holds an important position in the economic structure. It is the means whereby the comparatively small amounts of the investing public may be brought together so as to provide the necessary funds for the conduct of large-scale enterprise. In the early days of company promotion the liability of the shareholder was unlimited. In the event of the company getting into difficulties, the creditor could call upon the individual shareholders to make up the deficit, even though the original capital holding had been paid in full. Naturally, such an arrangement did not appeal to persons who wanted a " safe " investment, and in consequence there was, in the middle of the nineteenth century, a danger of the supply of capital running short just at the time when capital was in greater demand than ever. This danger was averted,

however, by legislation which established the principle of limited liability. A person could now invest his wealth and rest secure in the knowledge that his liability would be limited to the amount of his share capital. If this were fully paid up, his liability was at an end. Joint-stock companies grew rapidly after the important concession of limited liability, largely at the expense of partnerships and singly owned businesses.

Joint-stock organization is significant in that it accentuates the distinction between capital ownership and capital control. In the "one-man" business, and also in the active partnership, ownership and control are not for practical purposes divided. The same may apply to a private company in which the directors may hold the bulk of the shares. In the average public company the control is vested in the board of directors, subject to the shareholders' power (rarely exercised) at the annual or special meetings, to make a change in the company's direction and policy.

The system appeals to the ordinary investor, who is unable, or does not feel disposed, to take an active part in the management of the business. The different grades of capital holdings, ranging from the speculative deferred ordinary shares,[1] found in a few companies, to the relatively safe debentures, provide him with a choice of investment calculated to meet his personal requirements. Further, he need not "put all his eggs in one basket," as he would probably have to do if he were running a business on his own. Frequently he

[1] Deferred ordinary shares, which are comparatively rare, are those shares which receive all the balance of profits, if any remain, after the debentures, preferred shares, ordinary shares, etc., have received their respective dividends. Debentures are not shares, in the proper sense, but are loans to the company at a fixed rate of interest, which is regarded as a charge on the business, as distinct from a part of the profits.

spreads his investments over a number of undertakings, and so insures himself against undue loss if one of the ventures should fail.

Joint-stock organization, like any form of industrial control, is liable to abuse. The defect of " absenteeism " has already been touched upon in the account of division of labour. The shareholder, often living hundreds of miles away from the business, cannot be expected to have the same personal interest in the workers as does the average small master, who lives in the district, and is acquainted with the conditions and environment of his employees. The managing director may wish to make some improvement in the terms of employment, but he is not always a free agent. The shareholders, not having the same knowledge or understanding, may not be disposed to grant concessions as readily as the director who is on the spot. Similarly, the directors may deem it necessary to spend large sums in extending the business or in securing new plant, but if this would preclude the payment of a dividend for a year or two they may hesitate to make these improvements, lest trouble should arise with any shareholders who do not possess the same faculty of looking ahead.

A more serious abuse is experienced when a few financiers acquire a sufficient number of shares to give them control over the policy of the business. The system of free transferability of shares makes this possible. In the absence of a clause in the formal rules of the company requiring a higher proportion, the possession or control of 51 per cent of the shares may be sufficient to determine the future policy of the company, even perhaps to the extent of closing down its activities. The constitution of the joint-stock company has greatly facilitated the growth of combinations and monopolies during the last fifty years.

The Co-operative Society.

A form of industrial organization that has developed considerably in recent times is to be found in the co-operative society. A number of workers may combine to produce a commodity, the proceeds of which are distributed on a pre-arranged basis. Or, persons may co-operate simply in a purchasing capacity: they may buy large quantities wholesale, and, after selling the articles at the usual price, usually, though not always, to the members of the society, distribute the profit in the form of a dividend on purchases. Consumers' co-operation has attained enormous popularity in this country, though on the Continent co-operation of producers has made a comparatively greater appeal.

The consumers' societies, however, do participate to a large extent in production, directly, many of them, in running their own bakeries, dairies, etc., and indirectly, on a much larger scale, through the English and Scottish Co-operative Wholesale Societies. About five-eighths of the articles sold in the ordinary retail co-operative stores are manufactured by the wholesale societies, which have their own factories, coal-fields, wheat lands, tea and cocoa plantations, and other sources of supply. The reason why such effort is not classed as producers' co-operation is that the workers who make the goods play but a small part as a rule in the management of the concern, and, though the conditions of work are often above the average, differ little, if at all, in status from ordinary employees. The control comes, not from the producers, but from the consumers, and thus the position is essentially different from that obtaining in the self-governing workshops.

The co-operative society resembles the joint-stock company in that the capital is supplied by a large number of persons, and that interest is paid on the shares. A

further similarity exists in the extent of the enterprise, which is on a large scale, and offers all the economies resulting from centralized management and detailed specialization. While there are many points in common between the co-operative society and the joint-stock company, a closer examination reveals several important differences.

Thus, the profits of the co-operative society are distributed, for the most part, not in proportion to the share holding, but according to the value of the purchases. No member may have more than a certain number of shares, and on these a fixed interest is paid. The voting at members' meetings is not on a share but on a personal basis. A man with the full quota of shares has no more power in voting than a member with the minimum holding of one share. Members are not permitted to sell their shares, but they can always withdraw their capital from the society if they so desire.

The co-operative society has certain advantages over the ordinary store. The customers give fairly regular orders, and the co-operative manager is thereby enabled to make fairly accurate estimates of the stocks required, thus reducing waste to the minimum. Coupled with this advantage is the saving in advertisement. The ordinary store spends enormous amounts in obtaining new customers, and then further sums in retaining their patronage. The co-operative society advertises, it is true, to make the advantages of the movement better known, but, once the members are secured, their "loyalty" is stronger than that of purchasers at the average store and the need for extensive advertising is thereby reduced.

In other respects, however, the co-operative society is at a disadvantage compared with the joint-stock company. It has been shown in the previous chapter that risk-taking is an important factor in modern

economic enterprise. The working-class member of the co-operative society naturally chooses to play for safety, and prefers a fixed interest on his small capital to one that is liable to vary every year. In any case, the co-operative societies would be acting contrary to their original principles and would be severely criticized if they embarked upon speculative undertakings. In businesses involving an appreciable amount of risk the joint-stock company therefore has the advantage, especially where the owners can take up different kinds of shares and debentures according to their tastes and requirements. This gradation of shares has no place in the capitalizing of co-operative ventures.

External and Internal Economies.

The advantages of production on a large scale may be classified as internal or external to a business. Those advantages which are due to the initiative and skill of individual business managers, and are found only in particular firms, are known as internal economies. Those advantages which are due to the more general division of labour, manifested in the different occupational groupings, and in the localization of industries, are described as external economies. Transport conveniences, research and training centres, banking and insurance facilities, and other organizations for the promotion of industrial efficiency may be grouped among the external advantages. In practice it is sometimes difficult to draw a line between the internal and external economies ; for example, a man may be trained at one of the educational institutions associated with an industry, and then use his acquired knowledge to improve the internal organization of an individual business. The distinction is important, nevertheless, for many firms owe their success as much to the external economies that

have grown up with the trade as to the special abilities of their own particular organizers.

The internal economies may be further classified as technical and administrative. The economies due to improvements in the actual methods of production should be distinguished as far as possible from those arising from changes in the conduct of the business as a whole. Thus, a re-arrangement of the tasks in a workshop so as to improve the division of labour would provide technical economies; the decision of a firm to extend its activities, perhaps to absorb another firm, would yield administrative economies. But, again, one must be careful not to distinguish too sharply between the two main types of internal economies, most of which are interdependent to a large degree. For instance, the combination of two manufacturing firms may furnish administrative economies, and also, by increasing the size of the business unit, improve the technical efficiency inside the factories.

Advantages of the Large Business.

Many of the advantages of large-scale production have been indicated in the foregoing discussion, but there are certain economies that require special emphasis.

(*a*) First and foremost are all the advantages accruing from scientific specialization of functions, each group of men being entrusted with tasks for which they are best suited. In a small firm skilled men may have to devote some of their time to relatively inferior tasks, because there is not sufficient work to keep them fully occupied. Indeed, the firm may not find it practicable to employ highly trained and expensive workers, if their services are only intermittently required. The owner, too, may have to devote part of his time to purely routine work which, in a larger establishment, would

be entrusted to others, leaving the employer free to carry on the more responsible duties of the business.

(*b*) Besides the economy of labour there is the economy of capital. A large firm can secure credit facilities more readily than a small firm. It can purchase the most expensive machinery, and, furthermore, can run it continuously, thus spreading the charges over a considerable output. It is a great saving to be able to make full use of plant before it is superseded by more up-to-date devices. And, in the event of machinery having to be scrapped as obsolete before it is actually worn out, the large business can afford the sacrifice better than the small firm. Similarly, in the distributive trades, the large stores and multiple shops are at an advantage, for they turn over their stocks so rapidly that the proportion of capital required to the total business transacted is comparatively small.

(*c*) The large firm enjoys economies in the use of material, power and fuel. The " waste " can be dealt with in bulk, and be converted into valuable by-products. The provision and consumption of power on a large scale is particularly economical. A factory employing (say) three hundred men does not have to spend nearly ten times as much on power as does a firm employing thirty men. Also, in industries like heavy engineering, it is possible to pass the metal through several processes without allowing it to cool. Obviously the large firm in such industries has a more economical fuel bill in proportion to output than the small manufacturer.

(*d*) In buying and selling, too, the large business is at an advantage. Purchasing in great quantities, it can deal on more advantageous terms with the grower or maker, while in selling the goods it can often charge a lower price, in the knowledge that a quicker turnover and a greater profit will result.

(*e*) The large firm can better afford to lay out sums of money which may not bring in an immediate benefit, but which in the long run may yield a handsome return. Expenditure on advertisement, experiment and research is largely of this character, and is far more practicable for the large than for the small concern.

(*f*) Lastly, the large firm can offer greater resistance in times of trade depression. With its superior reserves and credit, it has a greater staying power than its smaller rival, which may be compelled to give up business after a short period of adversity. The large concern, on the other hand, may carry on at a loss, perhaps for a period spreading into years, in the expectation that eventual profits will more than compensate for the temporary sacrifice.

2. COMPETITION AND MONOPOLY

Forms of Competition.

Though the State is taking an ever increasing part in the regulation of industry and in the control of goods and prices, and trade associations and combines are becoming more widespread, competition still remains a powerful force. The scope of competition is wider than is often realized. There is, on the one hand, the rivalry between producers in their efforts to secure customers, and, on the other hand, the rivalry between consumers in their desire to obtain supplies from the sellers. The relative intensity of the competition between the respective parties depends upon the state of the market. If there is a glut, the competition between the sellers is comparatively keen; if there is a shortage, the rivalry between the buyers is more evident. Business men may not only compete as producers in obtaining orders for their goods, but also as

consumers in securing the necessary materials on the most advantageous terms.

The agents of production, too, may be regarded as competing for employment by the organizer. Thus, semi-automatic machinery competes with unskilled labour; raw materials or technical processes may be in rivalry with others. Similarly, there is competition as between articles of consumption for which the wants are alternative. One has a choice, for example, between tea and coffee, or between butter and margarine, or between real and artificial flowers. All these forms of rivalry have their place in a competitive system.

Hindrances to Perfect Competition.

Perfect competition, however, is rarely experienced. Various obstacles are encountered in everyday life that serve to prevent the freedom of choice and action from being enjoyed to the fullest extent. The more important elements of "economic friction" may be briefly outlined.

(*a*) The force of custom and habit is an important factor in economic matters. People become accustomed to a particular mode of action, or familiarized with the use of a certain class of article, and go on exercising their preference, perhaps, long after something superior has been discovered and placed upon the market. The cry for novelty that certainly exists in some quarters is not so strong in the aggregate as the conservatism of the mass of producers and consumers.

(*b*) The immobility of labour and, to a smaller extent, of capital is another frictional element. Such factors as local attachment and specialized training are a drag upon the free movement of labour that is implied in perfect economic freedom. Capital, too, may be sunk in highly specialized machinery and stock, which cannot be diverted to other uses except with

great difficulty and expense. To international trade in particular the immobility of labour and capital is a serious hindrance, which is rendered still more formidable by language and monetary difficulties.

(*c*) Ignorance is another factor that prevents the realization of perfect competition. Garden produce, for instance, may be offered at a lower price a few yards away, but a woman who does not know of the fact pays more at the shop near at hand. In an ideal market there cannot be different prices for the same class of article at the same time,[1] but the majority of retail markets do not approach this stage of perfection. In wholesale dealings, however, there is less scope for price variations. Dealers specialize in a few types of goods, and fractional changes in the price may mean the difference between a profit and a loss. Ignorance of the market is not so common in wholesale as in retail business, and competition is keener as a result.

(*d*) Where a large capital is required to start operations, the firms already engaged in the business have a considerable advantage over potential competitors. The price charged for the product may be in excess of that which would still provide a reasonable profit. But people who are tempted to set up in competition may be deterred by the heavy initial outlay that is required. The reluctance to enter is even greater where the demand for the product is variable and therefore liable to fall just as the capital has been invested in the necessary equipment.

(*e*) From the possession of such special advantages to the acquisition of a monopoly it is but a matter of degree. Monopoly is the negation of competition, and yet, though the statement seems paradoxical, it is

[1] See Chap. V, Sect. 2.

frequently the outcome of unfettered competition. Before considering this important subject, however, we may note the different forms of industrial combination that are often a preliminary to monopoly control.

Industrial Combination.

The economies of intense specialization and large-scale production offer a constant stimulus to increasing the size of the business unit. But a firm that is bent on securing the maximum benefits and, perhaps, a greater control over the market, may not be content with improving its own internal organization, and may proceed, therefore, to combine with other firms. Industrial combination may develop in two directions. Firms engaged in a similar line of business may join forces for the purpose of improving the scheme of specialization, and also with the object of obtaining greater powers in buying and selling. For example, a number of engineering firms or tea-shop proprietors may decide on combination within their respective spheres. Such a fusion is described as "horizontal," for the nature of the business is still, as it were, on one level. If, however, firms that are engaged at different stages in the production of a commodity decide to unite, the combination is said to be "vertical." Thus, the engineering concerns may acquire an interest in some iron and steel works. The tea-shop proprietors may decide to acquire bakeries, and even import their own tea. There are instances of vertical combination in which the firms control the complete chain of production from the obtaining of the raw materials to the disposal of the finished product.

The motives underlying the two forms of combination are not necessarily the same. Where vertical integration takes place the intention may be primarily to secure all the economies of continuous production. Though

monopoly may be the result, it is not necessarily the objective. A firm may have its own vertical organization running parallel with that of a competing concern. There are several shoe manufacturers, for example, who in addition to their factories, possess their own retail shops. Some of them have interests in the production of leather and other materials. But there is no monopoly.

In horizontal combination, however, the monopolistic tendency may be stronger. An association of manufacturers or distributors at one stage in the production of an article may be so powerful as to be able to dictate terms both to their customers and to those from whom they buy their materials. But it may happen that a horizontal combination comes up against a similar organization at the next stage. Obviously, therefore, the most effective organization, from the monopolist's point of view, is one which combines both vertical and horizontal integration. The strength of such firms, for example, as Imperial Chemical Industries or the United States Steel Corporation lies largely in the fact that they are organized in both directions.

Types of Monopoly.

All monopolies are not of the same structure, nor are they all framed for the same purpose. Some monopolies are due less to the organization by man than to the limitation and concentration of natural supplies. For example, when a mineral such as anthracite or potash is found in one area only, conditions at the outset are favourable to monopoly. Similarly, if a few individuals, such as bonesetters, possess a rare talent, they may be said, in effect, to possess a natural monopoly.

Of a somewhat different kind is the legal monopoly granted by the State. Thus, an inventor is able to patent his discoveries, and an author to copyright his

works. The object here is simply to protect a special form of property. The State also grants monopolies in the interests of technical efficiency. It recognizes that, in services such as water supply, single operation is an indispensable condition of economy. To prevent the absurdity of two separate sets of water mains running down one street the State grants a monopoly to a single body in each area. This body may be a private company, but as a rule the undertaking is in the hands of a public authority. Where the service has to be supplied over a large area, yet where competition would be undesirable, the State may grant exclusive rights to a single body, or, as in the case of the post office, railways, and electricity undertakings, run the services as public monopolies.

A restrictive practice that has widely developed in recent years is the regulation of prices by a central trade association or similar body, which does not, however, go so far as to interfere with the internal conduct of the producers concerned. It is a growing practice, too, for manufacturers to fix the prices at which their products are sold by the retailer to the public, and to impose penalties (usually by withholding further supplies) for non-observance of the conditions. Though such devices are to be distinguished from monopoly methods of a more blatant kind (and may under certain conditions have some justification) they are related in that they restrict the freedom of the market.

Lastly, there are the monopolies resulting from industrial combination. These organizations usually acquire many technical advantages from co-ordinated production, but the main objective is the elimination of competition. Such monopolies come in for a good deal of criticism, especially where they abuse their powers and " corner " the supplies of essential commodities.

Monopolistic Structure.

A period of intense competition frequently precedes the establishment of monopolistic control. The smaller businesses cannot put up the same fight as their powerful adversaries, and as a rule are driven to the wall. Sometimes the weaker firm is given the option of merging itself into the larger organization, and, as the alternative may be ruin, the offer is usually accepted. While the size of the remaining firms increases, the number gradually dwindles, until eventually the field is occupied by relatively few giant concerns. Perhaps the competition continues on more rigorous lines than ever; or perhaps by now the firms realize that by such cut-throat methods they are hurting nobody but themselves. Sooner or later, therefore, the leaders hold conference in the hope of checking the suicidal rivalry.

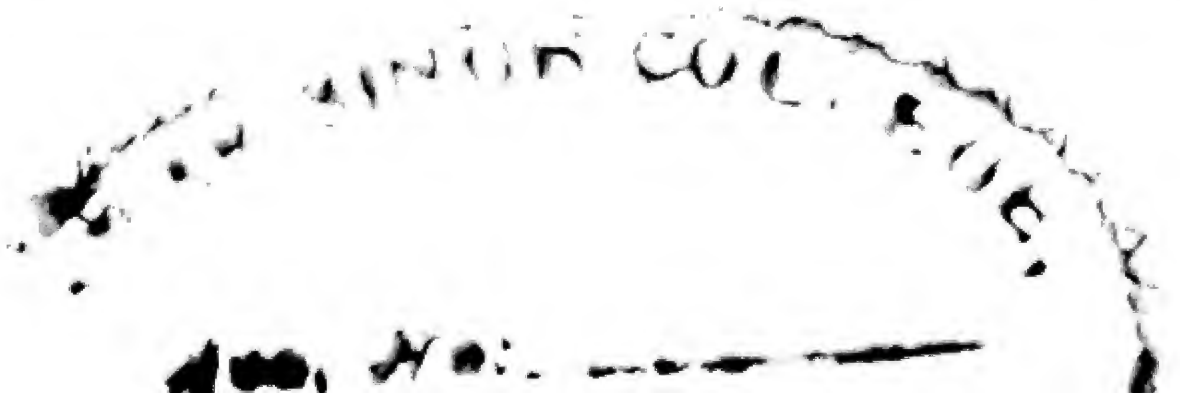
The outcome may be a general agreement whereby the market is divided among the firms, who contract not to sell outside their allotted territory. Or the firms may fix definite selling prices for certain classes of goods, and agree under penalty not to sell below these figures. Or a more intricate plan may be evolved whereby the profits of the different concerns are pooled, and then allocated to the participants on a pre-arranged basis. In all these arrangements the firms still retain a large measure of independence, particularly in the internal administration of their businesses.

In the "Cartel," a common form of monopolistic structure on the Continent, the plan is even more elaborate. The constituent firms, while retaining a semi-independence, agree to place all their products in the hands of a central sales bureau, which apportions the respective outputs in such a way that there is no overlapping. With effective control over output, it is possible to fix the selling price. Members of the cartel who produce

more than their specified output, or sell at less than the agreed price, or dispose of any goods unknown to the central body, are liable to fines or the withholding of supplies.

In the United Kingdom and in America the cartel, though not unknown, is not the prevailing form of monopoly structure. More common in these countries is the organization known as the "Trust," in which the firms agree to hand over the entire management to a body of "trustees." The methods of production, as well as the output and price, are rigorously governed. The Trust may even close down a number of hitherto competing factories, if, in the opinion of the directors, a smaller output at a high price would be more profitable than a larger output at a low price. For, as we shall explain more fully later, the power of the monopolist is not absolute. He can fix the output and leave the price to be determined by the interaction of supply and demand. Or he can fix the price and leave the market to decide what output will be required. But he cannot arbitrarily fix both the supply and the price. The power of the monopolist may also be limited by the existence or discovery of substitutes, which may be preferred to his product if he raises the price too high.

The trust, therefore, is a more closely knit organization than the cartel. In the trust there may be both vertical and horizontal integration, which permits of greater efficiency than is possible in the cartel, whose organization is mainly of the horizontal character. In addition, the control over the firms comprising the trust is more effective than that exercised by the sales agency over a number of semi-independent firms. There is no question of contracts between firms being judged "in restraint of trade," for their place is taken by positive instructions from the trust leaders to the component



branches. On the other hand, the members of the cartel have a certain advantage in retaining their individuality, which permits of a more personal interest in the conduct of the business.

Advantages of the Monopolist.

The monopolist usually, though not necessarily, conducts his business on a large scale, and consequently shares in all the benefits of extensive production that we have already noted. But he also enjoys additional economies arising from his immunity from competition.

(*a*) There is not the same liability to over-production under monopoly as under competition. The dangers arising from the lack of co-ordination are largely removed, and the monopolist is able to adjust the supply to the estimated demand within fairly exact limits. Periodical gluts, therefore, are not so common, and production is regular instead of intermittent. On its formation the trust may find it necessary to close down a number of works. Such an action is open to objection in many ways, but it enables the monopolist to concentrate the production in the best-fitted factories. Even from the standpoint of the community, it is preferable to have fewer but well-equipped works functioning regularly throughout the year than to have a large number of factories, many of which have to suspend their activities, owing to lack of orders, for months at a time. Against the unemployment that may result from the shutting-down of works has to be reckoned the disappearance of the short-time (or "under-employment") that frequently results from over-production among competitive firms.

(*b*) The monopolist effects a great saving in the expenses of securing business. He can cut down his advertisement costs considerably, for a large portion

of the money spent by competing firms on advertisement merely takes trade away from other firms without materially adding to the aggregate demand. The monopolist has no need to spend sums in this manner. Though he may continue to advertise his goods, the motive is not to increase the sales of one particular firm at the expense of another in the same line, but to extend the whole market. By an increased output he can secure greater economies in his production costs, which leave a good profit after the expenses of advertisement have been met.

Similarly, the monopolist is enabled to dispense with the services of a large number of salesmen and travellers. The same line of argument can be followed. To the extent that a traveller discovers entirely new fields, thereby adding to the total demand, his work is distinctly beneficial both to the firm employing him and to the industry as a whole. But to the extent that the traveller secures orders that previously went to another firm, thereby not increasing the market in the aggregate, his employment, judged from the standpoint of the community, is not so useful.

(*c*) The monopolist frequently benefits from a reduction in freight expenses. A manufacturer in the north of a country may send goods to the south, while a competitor in the south, making identical goods, may have customers in the north. The "cross-freights" that arise from such conditions are eliminated under monopolistic control, for the market is divided out among the several branches constituting the monopoly, so that each producing centre supplies the customers nearest to hand.

(*d*) When a number of hitherto independent firms combine, their patent rights and knowledge of special processes become the property of the whole combination.

The directors of the monopoly concentrate upon the most advantageous methods without fear of penalty, and the efficiency of the whole organization is thereby improved. Also, in the marketing of the product, the directors are able to exploit the special brands and trade-marks that formerly were the property of the individual firms.

Criticisms of Monopoly.

The monopolist has encountered bitter criticism both from manufacturers and from the general public. Business men who have dealings with a trust or a similar organization often complain of its excessive power in bargaining, and occasionally of what they consider to be the unfair methods adopted. Would-be competitors have frequently been crushed by such methods as deliberately selling for a time under cost of production, or charging discriminating prices in different areas according to the intensity of competition, or giving special discounts to "loyal" customers. There have been instances in America of the railway companies being induced to grant preferential rates to the trust, thus enabling it to subdue, and eventually absorb, its rivals. Questionable methods like these naturally cause resentment.

The objections on the part of the public are even greater. More often than not, the policy of a trust or cartel is conducive to a rise in the price of the article, particularly if there has been hitherto a period of extreme competition and low prices. We have previously observed that the monopolist's power is limited, and that he does not in all cases raise the price of the article for fear of a fall in the demand and perhaps in his net profit. It is conceivable, in fact, that, as a result of the concentrated and co-ordinated production, the

monopolist may so reduce his costs that prices are brought down as well. But it does not follow that, because he produces more cheaply, he will pass on the benefit to the consumer. If the conditions do not necessitate a cut in prices it is not unlikely that he will pocket the difference himself. It is safe to generalize that the formation of a monopoly will lead to a rise rather than a fall in prices.

The monopolist is open to censure in so far as he artificially restricts the supply of a necessary article in order to force up the price. Where the monopolist finds that a high price for a small supply is more profitable than a low price for a large supply, his interests are directly antagonistic to those of the consuming public. Public control of trusts and similar bodies has long been advocated, but no satisfactory method has yet been discovered. In the United States, where the trust has become most prominent, successive governments have endeavoured to curb its powers, though so far with little success. The power of the monopolist is growing in this country, too, as is evident both by casual observation and by the study of official reports. To mitigate the evils of monopoly, yet to retain such economies as result from centralized control, is a problem that must soon be faced by legislators in all developed countries.

CHAPTER IV

MONEY AND EXCHANGE

Synopsis

1. *The Nature of Money*

Exchange is a branch of production, and is beneficial in that it increases the total utility of things consumed, and permits of efficient specialization. Barter, the simplest form of exchange, is subject to serious difficulties; it necessitates a double coincidence of goods required and offered, and lacks a common measure of value and a means of subdivision.

The functions of money: (*a*) means of payment, (*b*) measure of value, (*c*) store of value and standard for deferred payments. Gold has been chosen almost universally because it fulfils the requisite conditions of a good standard material, viz., high utility and stability of value, together with additional advantages of portability, durability, divisibility, constant quality and malleability; with the development of the credit system, the first two conditions are the most important. Token coins are more convenient and economical for small transactions, but their legal tender is limited.

Paper currency is similar to token money; it may be classified as representative and convertible, fiduciary and convertible, conventional and inconvertible. Gresham's law: "good" money is driven out by "bad," through hoarding, melting down and exportation; application of the law to over-issued paper as well as to debased coinage; qualification of the law, especially over a long period.

2. *Credit and Banking*

Credit is based on trust. Credit instruments perform a greater amount of work than regulated currency. The function of credit in cancelling mutual indebtedness; international settlements; debts close together made to settle debts far apart. Banks facilitate credit dealings and economies in the use of coin; the function of clearing houses and the central bank.

The banker borrows at low rates and lends at high rates; the apparent paradox that a bank lends more than is deposited in cash; only a certain proportion of the cash deposited is ordinarily required at a time, the rest being available for loans;

loans are rarely taken in cash, and permit the banker to lend still further; loans create deposits; increase in bank deposits not necessarily an indication of increased wealth. The banker's assets must be kept as liquid as possible; some kept as "till money" and at the central bank, the remainder lent out and invested in quickly realizable securities. The services of credit: the function of facilitating production in anticipation of demand is even more important than that of providing a cheap medium of exchange.

I. THE NATURE OF MONEY

WE have shown in the previous pages that an article is not finally produced, in the strict economic sense, until it is in the hands of the consumer; that the division of labour entails of necessity a system of exchange, which, with the evolution of industry, has come to have an important place in the general scheme of production. The following account of the machinery of exchange is therefore but a continuation of the study of the economics of production.

The Nature of Exchange.

The old maxim that "exchange is no robbery" is the reply to those who maintain that, if one party finds exchange to his advantage, the other must suffer a corresponding loss. It used not to be realized that by the exchange of goods *both* parties might gain. One man might have an abundance of corn but be short of meat; another might have a surplus of meat but be requiring corn. Exchange of corn for meat, in equitable proportions, would obviously be to the advantage of both parties.

Exchange is beneficial in that it increases the total utility of a community's wealth. What is comparatively superfluous to one person may be highly desirable to another, and the more efficient the system whereby the respective goods can be exchanged for each other, the

greater will be the welfare of the people as a whole. Exchange, too, permits the abilities of the people to be used to the greatest advantage. As previously pointed out, if every man were to give his full working time to the production of those goods for which he is either by nature or by training best fitted, the production of the community would be considerably greater than it would be in the absence of such efficient specialization. But without an adequate system of exchange no economic division of function could take place.

Difficulties of Simple Barter.

Exchange in the most elementary stage may take the form of simple barter. Thus, a schoolboy barters his knife for an electric torch; or an Eskimo barters furs for tinned foods. Barter, however, in the strict sense is very rarely encountered. The ordinary person of to-day would find it almost impossible to satisfy all his wants by the simple process of direct exchange of goods for goods.

To be effective, barter necessitates a double coincidence of articles required and offered. For example, if X has some cloth to dispose of and wants some corn, while Y has corn and happens to want some cloth, then exchange might take place. But if Y does not want cloth and prefers to barter his corn for boots, exchange between X and Y breaks down, unless a third person, Z, is found who wants cloth and offers boots. By mutual arrangement a "triangle of exchange" might thus be effected among X, Y and Z.

The difficulties of barter, however, are not yet at an end. On what basis would the articles be exchanged? Cloth may be plentiful, and corn very scarce. What is the common denominator by which yards of cloth and bushels of corn can be compared? And what would be

the respective values in terms of boots? Thus, barter in its crudest form is deficient in that it employs no common measure of value. But there is another form of barter, which, though outwardly the same, is more advanced and more practicable. When X exchanges his stock of cloth for Y's stock of corn without any preliminary valuation, the barter is of the most elementary kind. If, however, they know that cloth is so many shillings a yard, and that corn is so many shillings a bushel, exchange can take place on a more satisfactory basis. Money has not actually been handled, but it has been used, nevertheless, to measure the respective values.

Still another difficulty of barter may be noted. A person may have a house for sale, but may want to exchange it for several different articles. Even if he found all the people who had the various things he required, how is he going to divide his property among them? Some articles cannot be split up at all; others, such as precious stones, can be divided only with a great loss of value. Thus the third drawback of barter is the absence of a means of subdivision.

Several other difficulties inherent in barter can readily be found, but enough has been said to show that the system is practicable only in very small and simply organized societies.[1]

In modern communities the obstacles to barter of any kind are almost insuperable. One can hardly imagine an artisan, in the manner of a town-crier, proclaiming his wares and requirements in the following terms: "Oyez! Oyez! I am an electrician, and have for

[1] The so-called barter schemes that have in recent years been employed in international trade, following the breakdown of normal methods, are in reality based on preliminary valuation of the goods concerned, and are not therefore barter in its primary form.

sale forty-four hours a week of my labour for fifty weeks of the year ; and I want someone to give to me in return for my labour the use of a house and garden, the necessary furniture, food and clothing for myself and family, fuel and light, tobacco, matches, and a daily newspaper, writing paper and postage stamps, life insurance and medical attendance, a weekly entertainment at a theatre, an annual holiday . . . .'' The requirements could be extended almost without limit. We may conclude that the complex system in which we now live renders simple barter virtually impossible ; indeed, that our economic system could never have evolved to its present position had not a more efficient system of exchange been discovered.

The Functions of Money.

To overcome the above difficulties people invented money, which may be defined as a commodity chosen by common consent to serve as a means of exchange, and also to act as full discharge of obligations. The main functions of money, which have already been implied, may now be noted in more detail.

(*a*) Money serves as a *means of payment.* Goods are sold for money which is then spent on other goods. Thus it is not necessary as in barter to seek a physical coincidence of things offered and required. The money obtained from the sale of one's goods may be spent hundreds of miles away, an advantage that would be lacking under barter. Besides acting as a medium of actual exchange, money is used for discharging obligations such as the paying of taxes and other dues.

(*b*) Money fulfils the function of a *measure of value.* The material chosen to serve as money has a commodity value in itself, and the values of all other articles are reckoned in terms of the accepted standard. As

intimated above, an advanced form of barter may entail the employment of a measure of value, though not of course an ordinary medium of exchange.

(*c*) Money also acts as a *store of value* and a *standard for deferred payments*. If a person does not wish to spend all his income as soon as he receives it, but prefers to put something aside for future requirements, he can, by the use of money, distribute the expenditure over as long a period as he likes. While the actual money medium may keep indefinitely, one should not overlook the danger of a rise in the general price level, with a consequent depreciation in the purchasing power of the money set aside. On the other hand, a fall in the level of prices would cause the value of the money to appreciate.[1] Similarly, money serves as a standard for credit payments. A manufacturer will not deliver goods in the present for payment in the future, unless he is reasonably certain that the money at the time of payment will have approximately the same purchasing power as it has at the date of the contract.

The Gold Standard.

Such considerations lead to the further questions, what are the requisite qualities that must be possessed by the commodity chosen to serve as standard money, and what are the special reasons that led to the adoption of gold, and, in a few countries, of silver, in preference to other materials?

First, the material must be valuable as a commodity, for otherwise it could not serve as a unit for measuring the values of other commodities. The fact that it possesses utility causes the commodity to be desired for its own sake as well as for its purchasing capacity. The

[1] See Chap. VI, Sect. 3.

cattle used in early times and the precious metals of later periods both satisfy the condition of general acceptability.

Secondly, the material chosen to serve as money must be as stable in value as possible. If the commodity is liable to serious fluctuations in its own value, it necessarily involves corresponding variations in the prices of all other commodities. Irregular price movements are bad for trade, especially where credit transactions are the rule. People will be unwilling to enter into contracts involving future deliveries and payments if the price level is subject to violent fluctuations. Gold satisfies the condition of stability of value better than any other single commodity, though the events of the past few years show that it is far from perfect in this respect. Gold coin and bullion are used up at a very slow rate, while the annual production of gold, large though it is, amounts to but a twentieth or so of the world's total stock. The supply, and therefore the value, of gold is not under ordinary conditions liable to sudden alterations.

The attributes of value and stability are essential, even if the standard money does not circulate from hand to hand, but serves simply as a measure of value, while the actual work of exchange is effected by token coins, paper currency and other instruments. The following qualities are mainly essential when the standard coin, besides serving as a measure of value, also circulates as a means of payment. The material must have its value concentrated in small bulk ; gold is more portable in this respect than all the other metals, except platinum. The coin should be durable, for a material that rusts on exposure or quickly wears thin through frequent handling would involve great loss to the Treasury ; gold is practically indestructible and, in the

form of an alloy, is sufficiently hard to stand constant usage. The selected metal, too, should be easily recognizable; gold is more distinctive in appearance than platinum or silver or nickel. The remaining requisites of the money material are that it should be capable of division without loss in value; that it should be of the same quality throughout, or should at least be capable of being standardized; and, lastly, that it should be malleable, so that the coins can be readily moulded and stamped. Practically all the metals fulfil the last three conditions, and gold, therefore, has no special merit in these respects.

The list of requisite qualities could be extended, but it is sufficient for our purposes to realize that, in those attributes that are of primary importance, gold has been proved to be greatly superior to the other metals. With the development of a paper currency and a system of credit, the requisites of value and stability are more imperative than ever. It does not matter very much in a credit transaction whether the substance chosen to be a standard of value is portable, or divisible or malleable. But it is a necessary condition that the medium should have a commodity value, and that this value should be stable to a high degree.

Token Coins and Legal Tender.

The gold coin may be satisfactory as the standard of value, but it would be extremely troublesome if we had to use the metal as a medium of exchange in small transactions, such as purchasing a pound of cheese or a pair of shoe-laces. We avoid the inconvenience of tiny gold coins by employing silver and bronze tokens, which are so arranged that they can be used for effecting the smallest purchases. Not only are they more convenient than gold, but they are much cheaper, for the value of the metal content is considerably less than the

face value. As the State makes no charge for converting gold bullion into sovereigns and half-sovereigns, the minting of these coins involves a public loss; an appreciable profit, however, is made on the silver and bronze currency. The token coins are ordinarily exchangeable against gold at the legal rate, or, where gold payments have been suspended against the paper equivalent. To make the circulation of token coins effective, the State gives them the rank of "legal tender" up to specified limits (£2 for silver and 1s. for bronze coins), by which is meant that people are compelled to accept the token money, if offered within the prescribed amounts, in exchange for goods or in discharge of obligations. Gold coins, of course, are legal tender up to any amount.[1]

Paper Money.

Token coins are cheaper to issue than standard currency, but paper money is cheaper still. Paper notes are really nothing more than tokens, the content value of which is practically nothing. Their purchasing power is due to their degree of convertibility into the standard coin and also to their status of unlimited legal tender.

Paper money is of several kinds. The simplest form is the note issued against a full backing of gold or other precious metal. The object of the issue is largely to avoid the trouble and risk of conveying gold on one's person, and to reduce the cost of the wear and tear of

[1] Gold currency has not, of course, been in circulation in this country for a number of years, its place having been taken by a rigidly controlled paper currency. Until such time as the monetary system is given some final shape, the account in the text may serve as a general background to what has become a complex and somewhat arbitrary mechanism. A more detailed narrative of the development, during and following the two World Wars, is given in the author's *Substance of Economics* (Pitman), 1948 edition.

coins. Such notes are termed "representative," in that they stand for an equivalent value in specie, and are fully convertible. Those notes, on the other hand, that are not so backed are described as "fiduciary." As the word implies, such notes are based upon the credit of the issuing body, and are therefore of the nature of credit instruments.

Confusion often arises over the convertibility of the paper issues into gold. It is a mistake to assume that only representative notes can be freely converted. While it is true that some fiduciary issues do not carry with them the power of convertibility, there are others that are practically equivalent in this respect to a fully representative issue. For example, the notes issued by the Bank of England were formerly convertible into gold on demand, notwithstanding the fact that a certain proportion of them was fiduciary in character.[1] The reason why a note issue is claimed to be fully convertible, although there is not a hundred per cent gold backing,

[1] Under the Bank of England Charter Act of 1844 the Bank was permitted to issue fiduciary notes to the value of £14,000,000 against first class securities, mainly Government stock. All issues above this figure were to be fully backed by gold. Provision was made for the Bank of England to increase its fiduciary issue in the event of existing note-issuing banks giving up their privilege. In 1921 the Bank of England secured the complete monopoly of bank-note issue in this country.

During and following the war of 1914–18 the Treasury issued a considerable number of fiduciary notes. The Currency and Bank Notes Act of 1928 provided for the amalgamation of the Treasury and the Bank notes, the whole to be issued by the Bank of England.

On the outbreak of the second world war the gold that had been used as a backing for notes was made available for the more urgent purpose of paying foreign creditors. The fiduciary issue was greatly expanded, and continued to increase in the following years. The rise in prices during and after the war made further increases in the note issue inevitable. The relationship between money supplies and the level of prices is examined in Chapter VI.

is simply that there is under normal conditions sufficient gold available to satisfy the claims of those note-holders who require coin or bullion.[1]

Finally, there is the "conventional" paper money, whose acceptance is legally enforced, but which has such a negligible gold backing, if any at all, that the notes are altogether inconvertible. Such notes are "paper" in the full sense of the word. They are issued generally by governments that have no other means of meeting their obligations. Provided that the issue is kept within definite limits, the notes may more or less satisfactorily fulfil the functions of money inside a country's own boundaries. But there is always the danger that the issuing body will succumb to the temptation of going beyond the safety line, and that way lies disaster.

Gresham's Law.

In former times the amount of "bad" money in circulation was greater than it is nowadays. Not only was counterfeit money more common, but the standard coins, which used to have the edges unmilled, frequently lost some of their valuable metal by clipping or rubbing. The coinage, too, was often debased by indigent monarchs, who introduced a large quantity of alloy while retaining the face value of the currency. Hence there were in circulation a number of coins outwardly of the

[1] As a result of the war of 1914–18 most of the belligerent countries, including Britain, went off the gold standard—i.e. notes could no longer be exchanged on demand into gold. In 1925 this country made a partial return to the gold standard, permitting gold exports with a minimum of 400 oz., but virtually retaining inconvertibility of notes for internal circulation. In 1931, however, the financial stringency led to the abandonment once more of gold payments, and the adoption of a "managed" currency. The war of 1939–45, and the difficult years that followed, made an early return to an effective gold standard highly improbable.

same denomination, but actually of different values. If the standard currency is debased by 50 per cent, its purchasing power declines in the same proportion, for, as we have shown above, all other goods are evaluated in terms of the precious metal in the standard coin. Thus, two units of debased money would now have to be offered for an article that could hitherto be purchased for one unit. The rise in prices during the sixteenth century, for example, was partly due to currency debasement.

When different qualities of money were circulating alongside each other, it was found that people tended to withdraw the "good" money from circulation and to use only the "bad" money for effecting their purchases. This led Sir Thomas Gresham, one of Elizabeth's ministers, to formulate the statement that "bad money drives out good." Though he was not the first to observe this "law," it is usually associated with his name.

The reasons why the good money should be driven out by the bad are easy to understand. First, there is the natural inclination to retain the coin that is more valuable and perhaps more attractive in appearance. We are not very different in this respect from the child who spends all the old pennies before it parts with the new ones. Secondly, and more important, the good coins are often melted down, for, as the price of the metal rises with that of all other commodities, the bullion value of the coins is greater than their face value. Thirdly, the undebased coins are apt to be exported. People at home may be compelled by the laws of legal tender to accept debased money if proffered to them, but the foreigner will not accept such money, except at its true metal value. A merchant finds it in his interests to secure and export good money

only, which is thus literally driven out by the inferior coinage.

Gresham's law was first formulated with reference to debased coinage, but it may be applied also to an over-issued paper currency. Where an inconvertible paper issue is circulating together with standard coinage, there is a tendency for the full-value coins to disappear from circulation. They may be called in for the most part by the Government, or they may disappear for the reasons already stated. When paper money becomes seriously over-issued, metal currency of any kind may disappear entirely from circulation.

Gresham's law, however, is not free from qualification. The force of custom is sometimes greater than the expelling power of inferior money. If deterioration is so gradual as to be almost imperceptible, the general public may use with indifference the various qualities of money. Full-value coins and slightly worn coins may circulate with equal powers of exchange. Also, if the quantity of good coins should be insufficient to meet the demands of the community, inferior coins may be added to the circulation without fear of a rise in prices or of a diminution in the supplies of good money.

It may be mentioned, further, that Gresham's law operates mainly in a comparatively short period. Once bad money begins to drive out good, conditions tend to grow steadily worse until, sooner or later, the State is compelled to restore the currency to its former position. Bad coins are called in and replaced by a sound currency; excessive note issues are cancelled or backed by adequate reserves. Thus, in the long run, the good money may drive out the bad, which is the very opposite of the short-period tendency that we have been considering.

2. CREDIT AND BANKING

Credit and the Cancellation of Indebtedness.

The word "credit" implies "trust," and it is on mutual trust that the credit system is based. When we are told in business that a man's credit is good, we are given to understand that his financial position is sound, and that he can be relied upon to discharge any obligations he incurs. The term is applied also to the transaction itself. When goods are transferred in the present for a promise of payment in the future, a credit transaction is said to take place. Coins and notes, important as they are, do not enter into the majority of commercial transactions. In international and in wholesale dealings practically all payments are effected by credit instruments, while in retail trade also the use of cheques is growing.

By the employment of credit instruments it is possible to avoid the use of expensive coinage, and to cancel mutual debts to the satisfaction of both parties. Suppose that, over a period, Mr. Hatter supplies Mr. Shoemaker and his family with hats to the value of £5. During the same period Mr. Hatter buys £4 worth of shoes from Mr. Shoemaker. If all payments were made in cash immediately upon buying the several articles, £5 would be paid over Mr. Hatter's counter and £4 over Mr. Shoemaker's counter. But this cumbersome method may easily be avoided by the use of credit accounts. At the end of the period, a balance is struck between the two accounts, when it is found that if Mr. Shoemaker pays Mr. Hatter £1 the mutual indebtedness is cancelled.

In other words, by a simple credit arrangement it is possible to settle the claims of people on each other

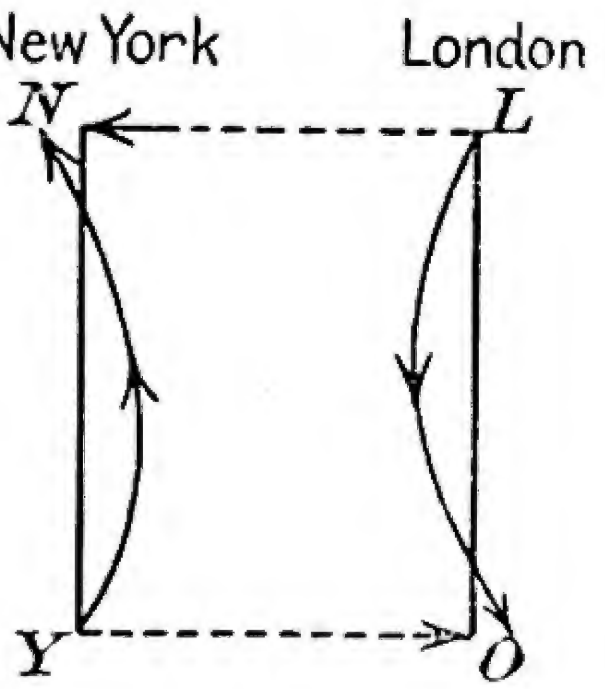
without using more currency than is required for paying the balance.

We may now proceed a stage further. Suppose that Mr. Hatter supplies Mr. Shoemaker with £5 worth of goods, but this time buys nothing in return. Mr. Shoemaker thus owes Mr. Hatter £5, and signs a promissory note in which he agrees to pay that sum at a specified future date. Mr. Hatter happens to want a new overcoat, and orders one for £5 from Mr. Tailor. It is possible that Mr. Hatter will ask Mr. Tailor to accept in settlement the promissory note signed by Mr. Shoemaker. Whoever holds the note can claim payment from the one who has signed it. If Mr. Shoemaker's credit is deemed to be good, Mr. Tailor will have no hesitation in accepting the note. On the specified date he receives the money from Mr. Shoemaker. Thus, only £5 changes hands in settlement of £10 worth of business. But suppose that Mr. Tailor already owed Mr. Shoemaker £5 for goods supplied. He could now hand over the promissory note in full settlement of his debt. Goods to the value of £15 would have thus been bought and paid for, without the use of a penny in ordinary currency. If the respective sums did not happen to balance, only the difference would need to be paid in cash.

But transactions such as these, while they serve to illustrate some of the economies of credit, are extremely rare. They are necessarily localized within a small area, and even then are subject to many difficulties. The coincidences assumed in the example may not be found. Mr. Shoemaker, though his credit is good, may be unknown to Mr. Tailor. Or, perhaps, Mr. Tailor wants ready money, and cannot afford to wait until the day on which Mr. Shoemaker has promised payment. These and many other difficulties would effectively hinder the

use of credit documents were it not for the agency of the banks.[1]

[1] *International Settlements.* The same general principles for the cancellation of debts may be applied to international trade. The employment of gold for such payments is an expensive matter, while the greater risks cause an additional expense in the form of insurance. Difficulty, too, may be experienced in securing sufficient gold, for the world's supplies are not nearly sufficient to serve as the actual medium of international exchange. More suitable methods have therefore been devised.



We may note, first, a simple example of the manner in which international debts may be paid without shipping gold. Suppose that a merchant in London, who may be described as L, owes a person in New York, whom we may term N, a sum of £200; also that Y in New York is in debt to O in London for the same amount. If gold were used in the crude manner already described, £200 would cross the Atlantic from L to N, and an equal sum cross in the other direction from Y to O. Suppose, however, that by some means the gold that was being shipped from L to N is diverted to O, and that the gold that was being dispatched from Y to O is diverted to N. By such means both N and O receive the sums to which they are entitled, and the gold remains in the respective countries, involving no expense for shipment and insurance. Thus, L would pay O and Y would pay N by means of a cheque, so that no gold need be employed at all. Thus debits and credits close together are made to settle accounts far apart.

In actual business, transactions such as these are not likely to happen, for L may not be acquainted with O, nor Y be acquainted with N. The principle, however, is important, and the difficulties are overcome by the use of the *bill of exchange*, which is a form drawn up by the creditor ordering the debtor to pay on a certain date a sum of money to a specified person or to the bearer. To change the example slightly, suppose that L is the creditor. L draws a bill of exchange on N, who, by writing his signature on the bill, accepts liability to pay. If he is personally unknown to L, he may get his bank to "accept" it on his behalf. But L, on receipt of the accepted bill, may be unwilling to wait perhaps three or six months for his money, and he therefore sells it to his banker, who deducts a discount at

Banks and Clearing Houses.

One of the functions of the banker is to facilitate the cancellation of mutual indebtedness, and to reduce the actual employment of coin. Outwardly the credit transactions may appear more complicated than ever, but actually exchange is very much simplified.

Let us continue the example of the three tradesmen. Suppose that Mr. Hatter and Mr. Shoemaker keep their accounts with a bank, which we shall designate A. If Mr. Shoemaker wishes to pay a sum of £5, he draws a cheque for that amount. In this way he instructs the bank A to deduct the sum from his balance, and to transfer it, in cash if required, to the payee mentioned on the cheque. But as the payee, in this case Mr. Hatter, also keeps his account with bank A, it would be a wasteful procedure for him to receive the cash from the bank and then re-deposit it for his own account. Instead, he sends the cheque to the bank with the instructions that his account should be credited with the amount. All that the bank has to do, therefore, is to subtract the sum from Mr. Shoemaker's account and add it to Mr. Hatter's account. The whole transaction is but a matter of book entries, yet the debt is settled as effectively as if actual legal tender were paid. A cheque is not legal tender, but Mr. Hatter willingly takes it in settlement if Mr. Shoemaker's credit is known to be good.

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the current rate. The banker may keep the bill until it "matures," or may sell it to a bill broker, from whom it may pass, directly or otherwise, to O. The last-mentioned sends the bill to Y, who is willing to receive it in settlement because he has faith in the name of the original acceptor. Perhaps the bill is further discounted with a bank or other agent, and at the end of the period the holder goes to N, or the bank that may have accepted responsibility on N's behalf, and obtains the money.

There are other means of settling international indebtedness, but the above method illustrates the general principle.

Mr. Hatter now wishes to pay for his overcoat, and therefore draws a cheque for £5 on bank A, and sends it to Mr. Tailor. (Or, if he prefers, he can endorse and remit to Mr. Tailor the cheque for £5 that he has received from Mr. Shoemaker.) Mr. Tailor happens to keep his account at bank B, and therefore the transaction cannot be completed in quite the same way. Mr. Tailor may cash the cheque at bank A, and then deposit the money with Bank B.

This trouble, however, can be obviated if the two banks come to an arrangement whereby each bank will accept cheques on behalf of the other, and settle the balances at convenient times. Thus, during the course of a day, bank A might cash cheques drawn on bank B to the value of £1,000, while B might cash cheques drawn on A to the value of £900. Altogether £1,900 worth of business has been done, yet the payment of £100 in cash from bank B to bank A is sufficient to balance the accounts.

But the need for even this small sum in cash is dispensed with under a developed banking system. A central bank is established in which all the ordinary banks keep part of their reserves. Then, if bank B has to pay bank A £100, it is only necessary to draw a cheque on its own account at the central bank, and pay it over to bank A, whose account at the central bank is now credited with that amount. This is practically what takes place in the British banking system. In London, as well as in certain provincial centres, there has been established a clearing house, to which the banks send their representatives. Statements are compared, and the balances are paid by drafts on the Bank of England, which credits the accounts of some banks and debits those of others. No coins or notes are used. Thus the Bank of England renders a service to the ordinary

banks similar to that which they perform for their own customers.

Bank Loans.

If a banker did nothing more than keep people's accounts, the depositors would naturally have to pay him for his services. But in practice the banker pays an interest on sums left in his care. The reason why he is able to do this is that the money deposited with him is lent out to business men and others at a higher rate of interest than is paid to the depositors. Like an ordinary dealer, the banker buys in the cheapest market and sells in the dearest. Money is the commodity in which the banker deals. He buys the use of money at a low rate of interest, and sells it at a high rate. He obtains it from people who are unable, or do not wish, to employ it in a productive manner, and transfers it to others who are, as a rule, more capable of putting it to economic purposes.

A glance at the financial statement of a bank shows, however, that more money has been lent out than has actually been deposited in cash. Some of the loans may not be repayable for months. Yet the banker has agreed to pay back on demand or at short notice all the money that has been deposited with him. What is the explanation ?

Another simple example will serve to explain this apparent inconsistency. Suppose that a banker in a small way receives £1,000 in deposits. Though the people depositing the money do so on the condition that they can withdraw it on demand, it is found that actually not more than (say) £100 on the average is withdrawn on any one day. People are content to leave nearly the whole of the money with the banker, only withdrawing sufficient cash to provide for their

ordinary requirements. The banker ascertains from experience the proportion required for "till money," and is able to put away the balance in his strong room where it may remain untouched for weeks at a time.

Suppose now that a manufacturer, requiring temporary assistance, visits the banker and asks for a loan of £500. The banker may have lent out what money he possesses himself, and thinks of the balance lying unused in the strong room. He has contracted to pay back that money on demand, but he knows that as long as his reputation remains sound the balance is not likely to be required. Moreover, the manufacturer offers good security in the form of property deeds and Government stock. If the banker were to lend £500 in cash, replacing it, for the time being, with at least £500 worth of securities, the real value of the assets would be no less than before. Yet a loan of £500 need not reduce the cash in the strong room by anything approaching that amount, and in fact might not diminish it at all. The reason is that the loan to the business man takes the form of giving him the right to draw cheques to the prescribed amount. He can take the money in cash if he wishes, but, as a rule, he prefers to use the more convenient credit instrument. His creditors, on the receipt of the cheques, may not trouble to cash them for coin and notes, but have the sums transferred to their own account in the manner already described. The banker, finding that the cash in the bank is still more than adequate for the ordinary demands of the depositors, is encouraged to go on lending money at interest until what he deems to be the limit of safety is reached.

When a bank makes a loan the transaction is entered on both sides of the balance sheet. In our example the manufacturer becomes the debtor of the bank for

£500, but the deposits are increased by the same amount. It is as if the borrower had taken the loan in the form of cash and then deposited it in the ordinary way. Hence the statement commonly made that a loan creates a deposit.

It follows, incidentally, that an addition to the bank deposits of the nation is not necessarily an indication of an increase in the national wealth. Indeed, bank loans, and therefore deposits, may for a time be on the increase (as during war-time), yet the net savings and wealth of the community be actually declining.

Bank Assets.

The banker has always to bear in mind the possibility of the depositors demanding back their money. So long as his name is held in good repute, only a small proportion of the total deposits will be required in cash ; but the slightest suspicion of his solvency will immediately cause a " run on the bank." His position may be thoroughly sound, and, if adequate time is allowed, he may be able to pay all claims in full. But he is bound by agreement to pay his depositors either on demand or at short notice, and, therefore, it behoves him to keep sufficient cash in hand or immediately available to provide for average requirements, with a certain amount over to meet unusual calls.

But money kept on the premises or at the Bank of England (which pays no interest on deposits) is yielding the banker no profit, and he is naturally unwilling to keep idle a greater sum than is considered absolutely necessary. On the other hand, he does not want to " lock up " more money than he can help in loans and investments, for unexpected demands from the depositors may arise at any time. He therefore lends a certain amount of money for short periods, even for a day or

two, to stockbrokers and others, at a low rate of interest. The money thus lent is said to be " at call," and provides the second line of defence when the cash reserves are in danger of giving out. The money lent for longer periods at a higher rate of interest per annum is more profitable, but not so easily realized in emergency. Banks also invest in stocks and shares, and other forms of quickly realizable wealth ; they do not sink a large portion of their funds in land or other immovable goods because, in periods of financial stress, it is difficult to raise money quickly on such forms of property.

The Services of Credit.

This brief survey of the credit system has been intended, not to explain its complicated workings, but to help one to understand its functions in the present economic system. We have noted that the institution of credit documents has effected a great saving in the use of the precious metals. Even if there were enough gold to serve as a medium, trading on a large scale would be very inconvenient ; international payments in particular would be cumbersome and wasteful.

But the more important function of credit is its service in facilitating production in anticipation of demand, and sometimes in ensuring the finishing of goods that, in the absence of financial assistance, might never be completed. Thus, a farmer may expect a good crop in due course, but is unable to meet his current expenses. Unless he is provided with credit, his crop is liable to be spoiled. Similarly, a manufacturer may be busily engaged in the winter and spring months preparing for a summer demand; having sunk all his capital in machinery and material, he seeks assistance from the banks in order to carry on. Some manufacturers might have to wait months, even years,

before their products are finally disposed of and paid for. The motor-car, for example, that is bought to-day is composed of parts the manufacture of which may have begun a year ago. Labour had to be hired, materials had to be bought, rental had to be paid, throughout all the stages of production in order that the motor-car might be sold at the present time. We cannot expect the workers in the mines, in the rubber plantations, in the engineering shops, and in all the other factories involved in the production of motor-cars, to wait for their wages until the final product is sold. Nor can we expect the manufacturers of the various parts, who have had to disburse large sums in wages and other expenses, to wait until now for payment. Some producers may have sufficient savings or income to permit of their waiting a long period for settlement of their accounts, but the majority of firms are not in this fortunate position, and must be provided with credit if they are to play their necessary part in production.

To sum up, credit has been shown to perform two main functions. It provides a medium of exchange which is cheaper, more convenient and more adaptable than standard metallic money. This was the original function of the credit system. Even more important, it provides the means whereby production can be carried on in advance of demand. Without the services of credit the economic system could never have reached its present position.

CHAPTER V

THE DETERMINATION OF PRICE

Synopsis

1. *The Problem of Valuation*

The principles of valuation are fundamental to all economic questions; they determine the distribution of income as well as the exchange of goods. Functions of price in providing an indicator for production and consumption to follow; subject to certain conditions, high prices encourage production and discourage consumption, while low prices restrict production and stimulate consumption. Demand and supply; demand distinguished from desire, and supply from stock; demand and supply meaningless apart from price.

Former theories of prices; their assistance in appreciating the modern doctrine. The cost of production and labour theories argue from supply side only, and do not account for changes in price after production, or for low price of misdirected products. The utility theory argues from demand side only, and does not account, among other things, for the "paradox of value."

2. *The Theory of Prices*

No theory can be complete unless it takes conditions of both demand and supply into account. Analysis of demand; the law of diminishing utility; applicable to different units of expenditure of an individual and also to total expenditure of different people. Marginal utility and the marginal purchaser; position of the margin fixed by the price; equal units of a commodity, though they give varying utilities, are identical and interchangeable; impossibility in a perfect market of more than one price at a time; from side of demand, price tends to coincide with marginal utility.

Analysis of supply; cost of production made up of prime and supplementary costs; importance of distinction varies according to the type of industry; in period of depression price may fall to prime cost, but over long period must be at least equal to total cost. Marginal cost and the marginal firm; position of the margin fixed by the price; equal units of a commodity, though produced at varying costs, must sell, in a perfect market,

at the same price ; from side of supply, price tends to coincide with marginal costs.

Provisional conclusion that the point of coincidence between marginal utility and marginal costs, both as measured in terms of money, indicates the price. Comparison of the marginal doctrine with the former theories ; by taking into account the forces of both demand and supply it gives a more balanced account.

1. THE PROBLEM OF VALUATION

In the previous chapter we were concerned with the mechanism of exchange. We took it for granted that a suit of clothes (say) cost £8, or that a pair of shoes cost £2, and proceeded to examine the monetary system whereby the transfer of these articles was effected. Our analysis, however, would be very incomplete if we did not inquire into the deeper question of why these prices are charged. What are the factors that determine the price of the suit or of the shoes? To say that, under certain conditions, these prices can be expressed in terms of gold does not take us very far. Gold is a commodity like any other, and its price is determined by the same general principles of economic valuation. Gold, or any other commodity, may be chosen to *measure* the price, but that is a vastly different thing from *determining* it. Why does one article have a certain power of exchange for another? That is the question that we must attempt to answer.

The principles determining price are fundamental to all economic problems. They apply not only to ordinary tangible commodities, but to services as well. In the present economic system the factors governing the price of a man's labour do not differ fundamentally from those fixing the price of his material goods. The same dominant principles regulate the price paid for the use of capital. Wages and interest, together with other kinds of income, are but prices in a special form. Hence

the principles of valuation may be applied to the apportionment of the social product as well as to exchange in the limited sense. In this and the following chapter we shall examine some of the outstanding influences bearing on exchange in general, and in the subsequent chapters we shall deal with their special application to the distribution of income.

The Functions of Price.

In a competitive system prices serve as guides to producers and consumers. A rise in the price of an article usually denotes that it is in relatively short supply. Producers usually have no other means of gauging the state of the market, and rely on the price for guidance. They increase their output until, with the more plentiful supplies, the price falls to its customary level. An undue fall in price, on the other hand, may indicate a glut, relative to the demand. Producers may, therefore, curtail their output, and eventually bring about a rise in the price. Similarly, from the point of view of the purchaser, a rise in price generally serves to check consumption, and causes the stocks to last a longer time, while a fall in price encourages people to increase their consumption, and, especially if the article is perishable, prevents the stocks from being wasted.

Price, therefore, is a controlling factor in adjusting supply to demand. A rise in price warns purchasers that stocks are short, and thereby induces economy in consumption. For most of us, whose incomes are not very liberal, this economy of goods is compulsory. The consumer himself is usually worse off as a result of a rise in price, but the more sparing use of limited stocks is a smaller evil than rapid consumption followed by a famine of goods. An undue fall in price warns the producer that

he, in conjunction with others, may have been turning out too many goods. Over-production of some articles, apart from the evil effects on trade and employment, may involve under-production of others. To the extent, therefore, that movements in the prices of particular articles help to maintain a balance between the different forms of production, they are rendering a useful service.

Demand and Supply.

We may, at this stage, define more clearly the significance of the much used—and misused—terms, "demand" and "supply." Many people are content with the simple statement that price is determined by the interplay of the two forces. To them demand and supply are the "open sesame" to all economic problems. But to repeat the formula parrot-like does not explain anything. It merely states a result that is evident to the most casual observation, without in any way analysing and relating the underlying forces that the terms represent.

Demand, in economics, is something more than the desire for a thing. A boy with empty pockets may regard with longing some sweets in a shop window. He is "so near and yet so far." He has the desire, but not the means to make that desire effective. Even if he had sufficient money in his pocket, it is possible that he would refrain from buying the sweets, for his wish for something else might be still greater. Before a demand can be said to exist in the strict economic sense, there must be a desire, the means to give it effect, and the willingness to use those means. Supply, too, needs careful definition, and must be distinguished from stock. A dealer does not necessarily offer all his goods for sale. If the price is low, and if the articles are

durable, he may prefer to hold them over until a better price can be obtained. His supply is only that part of the stock that is actually offered for sale.

Thus by demand we do not mean the need on the part of the consumer, nor by supply the stores possessed by the producer. Only the desires and the stocks that are, as it were, actually brought to the market are covered by the terms. The point at which the price is fixed determines, on the one hand, the effectiveness of the desire, and, on the other, the amount of the stock that will be offered for sale. If the price rises, the demand will fall, though the desire may remain the same; the supply will increase, though the stock is not augmented. If the price falls, some unsatisfied desires are, as it were, released, and the demand rises; but the sellers may reduce the supply, and put off the sale of the remaining stocks for another time. The position of the price determines what the actual demand and the actual supply will be. It follows, therefore, that *demand and supply cannot be considered apart from price.*

Former Theories of Prices.

It is helpful in studying the modern exposition of price to note the earlier attempts at explanation. The advantage is twofold. First, the former conjectures, in so far as they have an element of truth, provide the basis on which much of the present theory is built. Secondly, the realization of the faults and omissions of the earlier reasoning enables one to test and appreciate the truth of the modern doctrine.

Economists in the first half of the nineteenth century endeavoured to explain the determination of price by reference to the cost of production. By this was meant all the human efforts, together with the capital and raw materials, involved in the production of an article.

Some thinkers, maintaining that capital is the product of labour, and that raw materials cannot be won from nature without effort, reduced the theory to the simple contention that labour is the source and the measure of price. For our present purposes, however, it is sufficient to combine both theories in the statement that the price of an article is determined and measured by the quantity of effort and abstinence involved in its production.

It certainly seems reasonable and just that the greater the labour and sacrifice embodied in a commodity, the greater should be the price. But, as we emphasized at the commencement of the book, we are primarily concerned in economics with studying things as they are, and not as they might be under a different system. Therefore, in the present analysis, we must confine ourselves to an examination of the forces that determine prices under prevailing conditions.

The cost theory does not offer a complete solution of the problem. For example, it does not account for changes in the price of a thing after it has been produced. Changes in public taste may cause the demand to fall off unexpectedly, with the result that the price falls to even less than the expenses of production. Or the article may become so fashionable that its price rises considerably above the original level. Should the stock be incapable of increase, the price may bear no relation at all to the original cost. Thus, a violin by Stradivarius, or a painting by Rembrandt, or an early copy of the Bible, has a price to-day out of all proportion to the labour originally expended. When asked the reason, we simply answer that such articles are in great demand, that they are very scarce, and that in consequence they fetch a high price. No mention is made of their " cost of production."

Nor does the early theory offer an explanation in

the case of misdirected production. An article may have been costly to produce, yet, owing to mistaken estimates or faulty management, cannot find a market except at a loss. It may be contended, in reply, that only properly directed production should be taken into account, and that those goods which, owing to an imperfect estimate of demand, cannot be sold except at a loss, should be regarded as abnormal, and therefore be excluded. But this argument provides its own answer. To say that the demand must have been properly estimated is virtually to admit that supply is not the only factor to be taken into account, and that cost of production *alone* is insufficient to explain price.

Realization of the deficiencies of the cost of production theory led economists in the second half of the nineteenth century to place great emphasis on the forces of demand. Some economists went so far as to say that utility, the basis of demand, was the dominant factor in the determination of price. It is perfectly true that demand is the stimulating force, and that no production will be initiated in the absence of a demand, actual or potential. But a moment's reflection will show that a theory of prices working from the side of demand only is open to just as much criticism as one from the side of supply ; that to base price on utility without any direct reference to cost would not be consistent with facts. For example, water is indispensable to existence ; its total utility is enormous, yet its price is almost negligible. On the other hand, the utility of a diamond necklace is apparently small, but its price may ransom a king. This " paradox of value," whereby a thing with a high " use value " (utility) may have a low " exchange value " (price), and *vice versa*, puzzled many generations of economists, for neither the cost theory nor the utility theory offered a satisfactory solution.

2. THE THEORY OF PRICES

The above outline of the earlier theories leads us back to the original formula that price is determined by the interplay of demand and supply. But this statement is not very informative, and it is necessary, therefore, that we should examine the interaction a little more closely. In the following pages we shall analyse the forces of demand and supply, and observe at what point there is equilibrium between them.

Demand and Diminishing Utility.

We noted in the first chapter that, although wants were unlimited in number, they were limited in capacity for satisfaction. One cannot, without a break, go on consuming unit after unit of an article, yet continue to derive unabated utility. The second cup of tea, for example, does not, as a rule, yield the same amount of utility as the first cup ; a third cup probably gives still less utility ; a fourth or a fifth cup might be found distinctly unpalatable, even though the quality of the beverage itself remained unaltered. The utility of additional units diminishes, therefore, until, should the consumption be carried far enough, the point of disutility is reached. The tendency for the utility of successive equal units to decline is known in economics as the law of diminishing utility. The *total* utility increases, but the utility of the *additional* unit diminishes.

The operation of this law can be seen on every hand. We are frequently offered an article at a reduced price if we purchase a large quantity. But, if we require only a small amount, to buy a large stock merely because the price happens to be low might turn out to be a bad investment. Though we can get an additional unit at

a lower price, the extra utility might be relatively still less. The same principle is at work throughout all our expenditure. We buy first those commodities that represent to us the greatest utility, and, as we continue our purchases, the successive utilities are on a diminishing scale. A man with a small income spends practically all of it on the bare necessaries of life. Another, whose income is somewhat more generous, buys the necessaries and some comforts as well. A third, who happens to be very opulent, besides providing for his ordinary requirements spends a large amount on sheer luxuries. The first pound of expenditure, if the satisfaction obtained could be separately assessed, would yield a greater utility than that of the last pound.

Therefore, whether we compare the total expenditure of different men, or whether we compare the different units of expenditure of the same man, the law of diminishing utility applies. The graduated scales of income tax may be viewed as an application of this principle. A man with ten times the income of another pays far more than ten times the amount of tax, for, as the income rises, the proportion of tax increases. Yet, although the wealthier person pays duty in greater proportion, his sacrifice of utility may be relatively less. Whereas the man with the smaller income may have to forgo something necessary for the proper maintenance of himself and family, the wealthy person may merely be deprived of a few additional luxuries.

Marginal Utility and Price.

The utility of successive equal units diminishes, but we usually stop consuming an article long before the utility drops to zero or below. We are continually comparing the utility of one article with that of another, and when the expected satisfaction from one commodity declines

below a certain level we divert our expenditure to that commodity whose utility is estimated to be greater. We put into operation what is usually called the Law of Substitution. Things with the greater utility are substituted for those with less utility until, assuming perfect knowledge of just how far to go, the total satisfaction from all the articles is at its maximum.

We compare not only one article with another, but the different *units* of each article. A housewife does not merely deliberate whether she will buy bread and meat and vegetables; she has also to decide how much of each she will purchase. Her decision depends upon the amount of money she has to spend, upon the prices charged, and upon the utility she places on various units of the different articles. Suppose, for instance, that beef is freely available. The housewife, rather than go without 1 lb., would, if necessary, pay 3s. The utility of the 2nd lb. might be measured by 2s. 6d.; of the 3rd lb., 2s.; of the 4th lb., 1s. 6d.; of the 5th lb., 1s. 3d.; of the 6th lb., 1s.; and so on. Her total purchase will depend upon the price per unit. If the price were 3s., she would buy 1 lb. only; if 2s. 6d., 2 lb.; until, if the price were 1s., she would buy 6 lb. Suppose that the actual price is 1s. 6d. At that price she is induced to purchase 4 lb., but no more. The term *marginal* is applied to the utility of the last unit that is purchased at a given price. Marginal utility is not fixed, but varies with the price. If, in the above example, the price of beef were 1s. 3d. per lb. the utility derived from the 5th lb. would be at the margin; if the price were 3s. per lb. the marginal utility would be obtained from the first, and the only, pound purchased.

Though the different pounds of beef render varying degrees of utility, it is not possible in practice to charge

a customer different prices, assuming that all the beef is of the same quality. The butcher, even if he could read the housewife's mind, could not say to her, "the first pound will cost you 3s., the second 2s. 6d., the third 2s., and the fourth 1s. 6d.; making the total charge for 4 lb. 9s." If, by a stretch of imagination, the butcher were to place the meat in four price categories, the customer would simply buy the meat in the fourth class, at 1s. 6d. per lb., for, to repeat, all the units are identical and interchangeable.

But, it might be maintained, since the housewife would be getting 9s. worth of utility from 4 lb. of beef, what is to prevent the butcher from charging her at the rate of 2s. 3d. per lb. for the joint? The answer is that the housewife decides upon her purchase by reference, not to the total utility, but to the marginal utility, though she does not, of course, reason it out in these terms. If the price were fixed, as suggested, at 2s. 3d. per lb., she would buy only 2 lb., for the utility of the 3rd and 4th lb. would, as shown above, be equivalent only to 2s. and 1s. 6d. respectively.

It should also be realized that the housewife is but one of a large number of customers, all of whom place varying estimates of utility on the meat offered for sale. There is a marginal purchaser among all the customers just as there is a marginal unit for each customer. If the article is such that the ordinary consumer requires only one unit—as, for instance, a house, or a motor-car, or a piano—the term marginal utility has not much meaning as applied to the consumption by one individual; but, if we examined the demand of all the purchasers, we should find some who are just induced at the price to buy one of the articles in question. The price paid by the marginal purchaser indicates the price paid by all the purchasers.

It would be impossible for the butcher to charge each customer just what, in his opinion, she is likely to afford. It is true, of course, that, where competition is poor, tradesmen may charge different prices according to the station of the customers. But, as a general rule, it is more practicable and convenient to have single specified prices for each commodity. For the present we shall assume perfect competition, both between sellers on the one hand and between buyers on the other. Under such conditions there cannot be different prices for the same thing at the same time ; all the units of an article must sell for the same price, notwithstanding the varying degrees of utility placed upon them by the numerous consumers.

Some articles may be used for many different purposes, ranging from a high to a low degree of usefulness. Water provides a good example. Rather than go without a bucket of water for drinking, a person might pay 1s. His maximum price for a bucketful for washing might be 9d. ; for cooking, 6d. ; and so on, through the various grades of utility, until he reached the bucketful for watering his plants. To this last unit he might attach a farthing's worth of utility. The supply of water being so plentiful, there is sufficient to provide for all these uses, from the highest to the lowest. The person buying the water for the higher purposes only does not pay according to the utility he derives, for the bucket of water for drinking is no different from that which is used for spraying the plants. All the units are identical, and the price of the unit which gives the greatest utility cannot be more than that of the unit which provides the least utility. If water were as scarce as in the Sahara, it would no longer be used for the lower purposes ; the marginal utility would be higher, and so would the price.

It follows, therefore, that the price at which all the units of a commodity are bought and sold is the money estimate of the marginal utility. It is not correct to say that marginal utility *fixes* the price, for the marginal utility is itself determined by the position of the price. Marginal utility merely *indicates* the price. As we shall show below, the position of the price is equally dependent on conditions of supply. Demand, price and supply act and react on one another in such a way that it is impossible to isolate cause and effect. All that we can say for the moment is that *the price of an article tends, on the side of demand, to equal the marginal utility, both as measured in terms of money.*

Supply and Cost of Production.

We may now turn to the forces on the side of supply, and approach the determination of price from that standpoint. Just as utility is the main element in demand, so cost of production is the dominant factor in supply. "Cost of production," however, is a very comprehensive term. As usually understood, it is composed of two main items, which are described as "prime costs" and "supplementary costs." Prime costs are the charges which vary directly with the output; they increase and decrease in the same proportion as the product, and stop when production ceases. The main charges under this head are in respect of labour and materials. Supplementary costs are the general overhead charges which have to be borne more or less independently of the specific output. Rent of buildings, rates and taxes, interest on loans, salaries to the managerial staff, and other establishment charges remain fairly constant, irrespective of the amount of product at a particular time. Thus, if for some reason the works were to close down for a month, the wages bill and the

expenses on materials and fuel might be reduced almost to nothing, but the overhead charges would still have to be borne. The respective proportions of prime and supplementary costs vary from industry to industry. In coal-mining, for example, wages compose by far the biggest item in the total cost. In engineering, on the other hand, interest on capital and other establishment charges furnish a large percentage of the total, while in the railway industry the proportion of supplementary costs is larger still.

The distinction between the two forms of costs is of practical importance. For example, it helps to explain the policy of the railway companies in initiating excursion trains at special cheap rates. The companies incurred enormous fixed charges whether they ran fifty trains or a hundred. In determining the ordinary rates the companies had necessarily to take into account the overhead costs. But if ordinary rates had always been charged a large number of people would never have travelled at all. Their custom would have been entirely lost. Therefore, in accordance with the principle of "charging what the traffic will bear," the companies supplied cheap excursions and other special facilities at prices that slightly exceeded the prime costs. The small surplus, which would have been lost if the cheap services had not been provided, was a useful item in the railway revenue. In fact, had it not been for these small profits on the cheap travelling facilities, the rates for ordinary traffic would have been even higher. The same principle applies, with still greater force, to the transport of goods. Those commodities which cannot bear a high freight charge are carried at low rates, for if the charges were not reduced the goods would not be sent at all. In such circumstances, the overhead expenses would have to be distributed over a smaller traffic, and the goods that

already paid relatively high rates might be called upon to bear even greater charges.

The relative proportions of prime and supplementary costs are taken into account in deciding the policy of a firm in times of depression. An employer whose expenses are mainly in respect of wages and materials may decide to close down his works until trade improves. He makes no profit, but incurs little loss. A manufacturer, however, whose supplementary charges are comparatively high, realizes that these costs will have to be borne whether his factory is closed or not. To stop producing might involve greater loss than if he were to keep the works open and sell his product at a lower price. He might, in fact, reduce the prices of his goods until they are little over the bare prime costs. When trade revived, he would probably be in a better position to undertake and execute orders than if he had suspended operations. His factory would be in good working condition, while the skilled workers, who might have been difficult to replace, would still be in his employ.

Over a long period total cost must be the determining factor on the side of supply. No producer will turn out goods unless in the long run he expects to cover all his charges and make a profit. But, as we have shown, he may, in a short period, be compelled by circumstances to fix his selling prices mainly by reference to the prime costs. The time element, on which more will be said later, is thus an important factor in the determination of prices.

Marginal Cost and Price.

When it is said that price approximates to the cost of production one may ask, *whose* cost ? A particular type of article may be produced by scores of firms, each with its own degree of organization, and therefore

with a cost of production differing from that of the other firms. Suppose, for example, that there are a number of factories engaged in producing kitchen chairs, all of the same quality. Though all the firms sell at £1. each, their cost of production is not on a uniform level. One firm is so well organized and possesses so many internal economies that it could sell the chairs, if necessary, at 19s., and still make a profit. A second firm could sell them at 19s. 6d. One of the firms, however, can just manage to exist so long as the selling price is £1. If the price were reduced by the slightest amount, the very low profit would be converted into a loss. This firm may be described as marginal ; its cost of production, including the minimum profit necessary as an inducement to carry on, is equal to the selling price of the chairs.

If the demand at £1 were sufficient to take the total output of all the firms, the more economical businesses would charge that price and thus make a surplus over and above the minimum profit with which they would otherwise be content. But suppose that the demand is not sufficient, or that some of the firms, wishing to extend their output and gain further economies, decide to reduce the price from £1 to 19s. 6d. The firm that was on the margin cannot compete at the new price, and goes out of existence. The firm that previously could, if necessary, have sold at 19s. 6d. rather than not produce at all now becomes the marginal firm. Again, we see that the costs of the marginal firm equal the selling price of the article.

It should be emphasized, however, that the selling price is no more fixed by the costs of the marginal firm than it is by the estimate of the marginal purchaser. Rather does the price govern the position of the marginal firm. The price may go up or down, and so may the margin. But at whatever point the price rests, there is

an identity between the costs of production of the marginal firm and the price.

But costs do not only vary as between different firms; they also vary within a firm as between one unit of production and another. We showed, when dealing with the organization of industry, that production beyond a certain point is liable to diminishing returns, or increasing costs, per unit of output. In practice this tendency is usually offset by improvements in the technique and in the management of the firm, but at any particular time the tendency may be much in evidence. Suppose that one of the superior chair-making firms in the above example decides to increase its output and so gain further profits. As it extends its operations, either or both of two things may happen. First, it may experience diminishing returns. The cost of producing additional chairs may rise until it approximates to the selling price. Beyond that point the firm, if well advised, would not extend its production, for additional chairs could be produced only at a loss. Secondly, with an increase in the output of chairs the selling price may fall. This, too, would serve as a check on unlimited output. In either case the manufacturer tends to produce up to the point at which the marginal cost of production equals the selling price of the article. To produce chairs beyond that limit would be distinctly unprofitable. Though all the chairs are not produced at equal costs, they must all, of course, be sold at the same price. We may infer, therefore, that *the price of an article tends, on the side of supply, to equal the marginal cost of production.*

Provisional Conclusions.

To sum up so far, we have shown that, from the side of demand, the price of an article tends to equal the

marginal utility, or the estimate of the marginal purchaser, while, from the side of supply, it tends to equal the marginal cost of production, or the costs incurred by the marginal firm. *The point of coincidence between the marginal utility and the marginal costs, both as measured in terms of money, indicates the price.* The price is not "governed" either by marginal utility or by marginal costs, working alone; it is merely measured by the respective amounts that are found to be in equilibrium.

We have yet to examine the interaction of demand and supply, and to consider some special problems of price determination. We may, however, at this stage observe in what manner the marginal theory offers a more satisfactory explanation of prices than the theories noted earlier in the chapter. The cost of production (including the labour) theory did not satisfactorily account for changes in price after a commodity has been produced. It did not explain the low price attached to things that have been over-produced or that have been the subject of misdirected energy. The marginal theory, by taking into account the forces on the demand side, solves the difficulty. Whatever the original cost of production, if the marginal utility is high, the price is high; and if the marginal utility is low, the cost is low.

Likewise, the marginal doctrine offers a more satisfactory explanation than the theory which reasons from the side of demand only. The utility theory failed, for instance, to account for the "paradox of value" that things with little utility are often of high price, while things with considerable utility are often very cheap. The marginal theory disposes of the apparent paradox by distinguishing between the utility of the total amount and the utility of a given quantity. Thus, the total utility of water is extremely high, but, owing to the

large supply, the marginal utility is very low, and therefore the price is low. The total utility of a diamond necklace may be comparatively small, but, owing to the scarcity of such commodities, the marginal utility is very high, and therefore the price is high. The marginal theory pays heed to the forces underlying both consumption and production, and consequently gives a more balanced account than could any theory working from one side alone.

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CHAPTER VI

THE DETERMINATION OF PRICE (*contd.*)

SYNOPSIS

1. *The Interaction of Demand and Supply*

The main conditions of a perfect market are free competition and an efficient system of transport and communication; the commodity should be capable of bearing cost of transport, should be durable, and should be capable of exact description. Elasticity of demand and supply, stocks are more or less fixed in a short period; demand is more elastic than supply in the short period; in general, the demand for necessaries is inelastic, that for luxuries is elastic, but there are important exceptions; prices of substitutes tend to move in sympathy with each other; elasticity of demand is an important consideration in determining price and in influencing fiscal policy.

Market price is the price at a particular time; it denotes the point at which there is equilibrium between demand and supply. Application of the marginal theory; identity between marginal utility and marginal costs.

The time element, the long period varies in extent from industry to industry; elasticity of demand and supply in the short and long period; in the short period the influence of demand on price is relatively strong, in the long period that of supply is more pronounced. Effects of changes in demand, importance of the length of the period and of the conditions of production; the immediate effect of increased demand is to raise the price, while the ultimate effect, under increasing returns, is to reduce it; the immediate effect of a fall in demand is to reduce the price, while the ultimate effect, under increasing returns, is to raise it; under diminishing returns the converse in the long run tends to apply, but the tendency to diminishing returns is itself usually nullified in the long period by improved technique and organization. Interdependence of prices of articles in joint demand; problems of joint supply; variable and fixed proportions; adjustment of joint supply so as to obtain the maximum return.

The determination of monopoly price; the power of the monopolist is not absolute; the theoretical monopoly price is that which yields the maximum net revenue, but it may not be charged in practice; the monopoly price depends largely upon

the returns in production and upon the elasticity of demand; the policy of price discrimination according to "what the market will bear."

2. *Money and the General Price Level*

Relative and general prices; the general price level may, alter, yet the relative powers of exchange remain the same; falling prices are advantageous to creditors and injurious to debtors; rising prices are beneficial to manufacturers and harmful to people with comparatively fixed incomes. The quantity theory of money and prices, necessary to take into account the use of credit instruments, the rapidity of circulation and the volume of trade; the price level varies directly with the amount and efficiency of money in circulation and inversely with the volume of trade.

The measurement of general prices by means of index numbers, the articles on which the index number is based shouldbe comprehensive and representative, and should be "weighted" according to their quantitative importance; index numbers are of service in the making of business forecasts, and also in the adjustment of wages.

1. THE INTERACTION OF DEMAND AND SUPPLY

HAVING analysed the general relation of demand and supply to price, we may proceed to examine the manner in which the two forces act and react on each other. We shall assume, to begin with, that competition is the rule, while, for simplicity, we shall for the present disregard the influence of non-economic factors that nowadays play a large part in State policy.

Markets.

A "market," in economics, has a broader significance than a localized gathering of buyers and sellers. We take it to mean a whole set of conditions under which the purchase and sale of an article are effected. The gold market, for example, is not confined to any particular place, but is normally world-wide in its scope. The first condition of a perfect market is that there should

be free competition among sellers on the one hand, and among buyers on the other. As we have previously indicated, in a perfect market there cannot be more than one price for an article at the same time. Where a diversity of prices exists, the forces of competition are evidently not fully at work.

For competition to be effective some further conditions should be fulfilled. First, there should be an adequate system for the communication of knowledge and the transport of goods. The advent of the telephone has done much in recent years to de-localize a market. Merchants can conduct their business from an office that is miles away from the centre where, in former days, they used to meet. Yet, though the market is no longer localized, it has certainly become more efficient. The carrying of goods, too, has been speeded up and made cheaper by the railway, road, and sea transport, which has, as it were, brought the sources of supply nearer to the place of demand, and made the economic world smaller.

Secondly, the cost of transport of a commodity should not be excessive in relation to its total value. Precious metals can be sent long distances at a very small cost in proportion to their value, but building stone can be sold only within a limited radius of the quarries. The durability of a commodity also affects the size of its market. Perishable commodities cannot, as a rule, be sold over a large area. The development, however, of quick means of transport and of processes of preservation and refrigeration has extended the market for these goods to a remarkable degree, and perishables, such as meat, fish and fruit, are now transported from one side of the world to the other.

In addition, the commodity should be capable of exact description, and, where necessary, of being

classified into distinct grades of quality. It is then possible to buy and sell the goods without going to the warehouse and examining each consignment. In fact, dealings may take place although the goods are a long distance away, and may not even have been shipped. Wool and cotton, for example, are bought and sold by merchants who rarely see the actual bales. All that is necessary is a sample or a description of the quality. By such means the expense of transport is considerably reduced, for the goods are transported directly from the source of supply to the place of manufacture, without going *via* a market that may be considerably out of the way. Many goods bought and sold in London never come near the capital; some of them, in fact, do not enter this country at all.

Elasticity of Demand and Supply.

Demand and supply are said to be elastic when an alteration in the price results in an appreciable change in the amounts required and offered. The distinction previously drawn between supply and stock and between demand and desire should be borne in mind. In a short period the stocks may be regarded as more or less fixed, but it does not follow that the supply will therefore be inelastic. If the article is very perishable the stocks and supply may be identical. The stocks of fishmongers on Saturday night show a closer approximation to the actual supply than they do earlier in the week. But where the commodities are durable, the elasticity of supply is greater, and the sellers may keep them away from the market until the price is deemed more favourable.

Demand, in a short period, is more elastic than supply. If the price of a thing goes up, the demand may fall immediately, but the supply may not be capable of

substantial increase until weeks have elapsed. There is no fixed ratio between a movement in price and a change in demand. For example, a reduction in the price of a motor-car by 50 per cent might increase the demand by 500 per cent. The demand for bread is extremely inelastic; a rise in the price of the loaf may hardly affect the rate of consumption. The demand for luxuries is usually elastic, while that for necessaries is relatively inelastic. But there are important exceptions to this general rule. A wealthy person may not be troubled by a rise in the price of a luxury, and may continue to purchase it in the same quantity as before. (Some people, in fact, relish an article simply because it is expensive: a rise in its price may act as a stimulus for them to buy more of it. A man may value an old master, not because it affords him an æsthetic satisfaction, but because it is a token of his prosperity.) On the other hand, the demand for a necessary may be fairly elastic, if there happens to be a substitute available. Tea, for example, is regarded as a conventional necessary, but a rise in the price may be followed by a fall in the demand, partly because a number of people turn to coffee as an alternative. Incidentally, there may be a rise in the price of coffee in sympathy with that of tea. Where goods are, within limits, capable of substitution, this sympathy in prices is always noticeable. Thus, the prices of butter and margarine, gas and electricity, petrol and benzol, are influenced in some degree by the prices of the respective substitutes.

The elasticity of demand is an important factor in influencing business and fiscal policy. Manufacturers in general, and monopolists in particular, have to study the degree of elasticity, for a high demand at low prices may yield greater profits than a low demand at high

prices. Also, when a Chancellor of the Exchequer is contemplating a new excise or customs duty, he has to consider the possible effects on consumption, for the price usually (though not necessarily) goes up by the amount of the tax. Some years ago the Government raised the duty on cigars, but the demand fell off to such an extent that the revenue from the increased tax was less than that previously derived from the smaller tax. The duty was therefore reduced, and, with a rise in the demand for cigars, an increased revenue resulted.

Market Price.

The market price of a commodity may be defined as the price ruling at a particular time. Conditions of demand and supply may alter, causing the market price to change from day to day, or even during the course of a day. But, at whatever figure the market price rests, it indicates the point at which there is equilibrium between demand and supply. It bears repetition to emphasize that no meaning attaches to demand and supply apart from price.

The interdependence of price, demand, and supply may be simply illustrated. Consider the price of a simple clock. If the price is reduced, the demand goes up and the supply contracts. Conversely, if the price rises, the demand falls and the supply increases. The demand and supply at the different prices in a comparatively short period may be set out in schedule form.

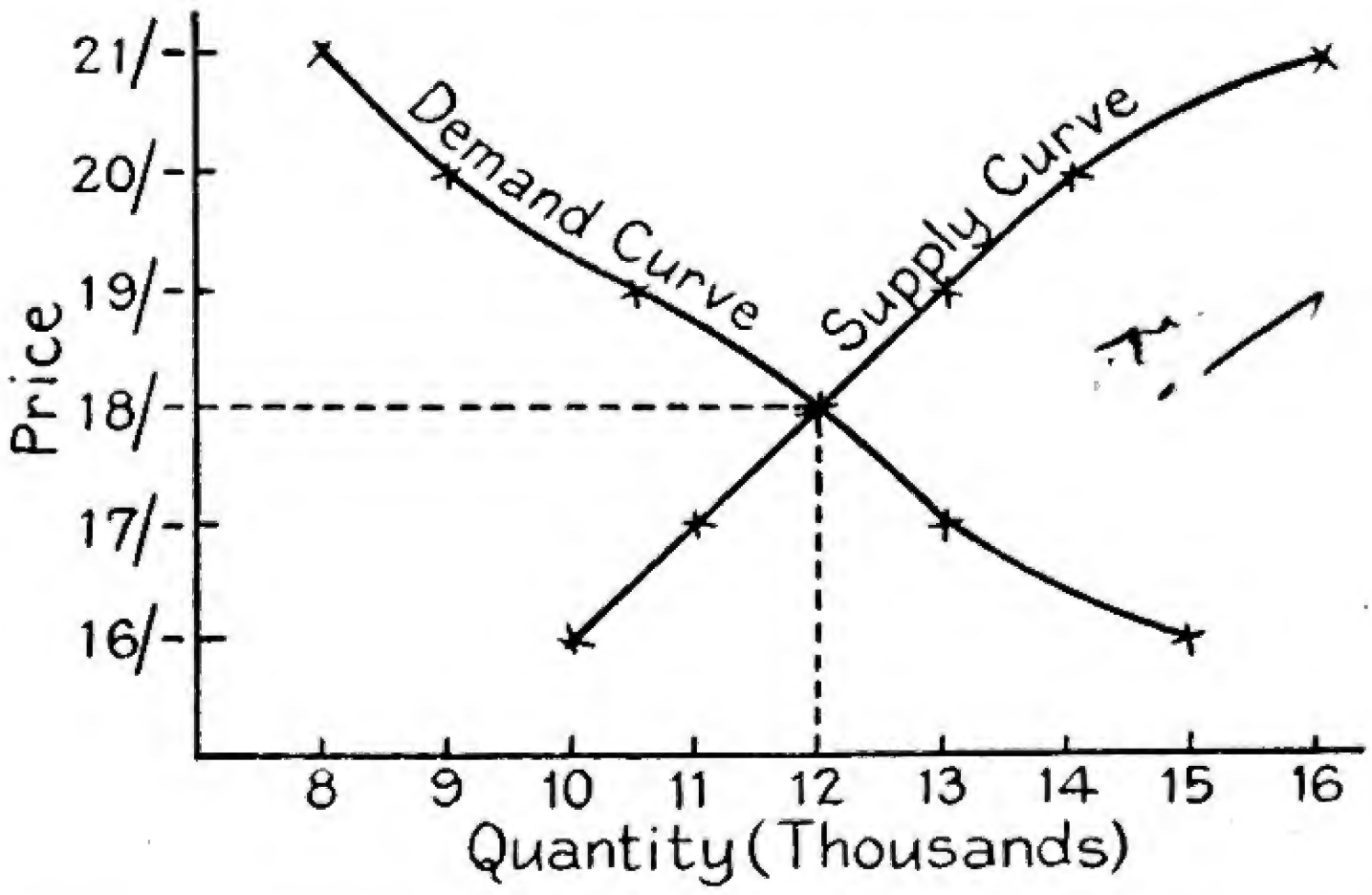
Demand.	Price.	Supply.
8,000	21s.	16,000
9,000	20s.	14,000
10,500	19s.	13,000
12,000	18s.	12,000
13,000	17s.	11,000
15,000	16s.	10,000

If the price were 21s., the amount offered would be 16,000, but the amount required would be only 8,000. Competition between sellers would bring the price down. If, at the other end of the scale, the price were 16s., the amount required would be 15,000, but the amount offered be only 10,000. Competition between buyers would force the price up. Eventually, we may assume, the actual price is fixed at 18s., for at that figure the amount offered, 12,000, is equal to the amount required, or, to put it another way, there is equilibrium between demand and supply.[1]

Application of the Marginal Theory.

To this simple example we may now apply the teachings of the marginal theory. Clocks at 18s. would not be required in excess of 12,000, because the utility of the article to those who did not buy would be less than that measured by the price. The table shows that

[1] The interaction of demand and supply may be represented in the form of a graph. The point of intersection of the demand



curve and the supply curve indicates the price (18s.), and the quantity (12,000) offered and required at that price.

many people who bought clocks at 18s. would have been prepared to pay a higher price. Had the price been 21s., 8,000 clocks would still have been purchased. But at the higher figure the quantities required and offered would not have balanced; and competition between the sellers would have forced the price down. The people who bought at 18s. but would not buy at 19s. were the marginal purchasers (assuming for simplicity that no intermediate prices were quoted). The utility which they derived from the clock was equivalent to no more than 18s. Those purchasers who, under different conditions, might have given more, actually paid the same price as the marginal purchaser,[1] for, as we have already pointed out, where the units are identical, they cannot, under competition, be sold for different prices. The marginal utility, therefore, as measured in money, indicates the price that is charged to all the purchasers, irrespective of the individual utilities that they may derive.

It is equally evident that no more than 12,000 clocks would be offered at 18s., because, under the prevailing conditions of supply, the cost of production to those who did not sell would be more than 18s. Presumably the additional 4,000 clocks, that would be offered if the price were 21s. instead of 18s., either represented the output of firms which were not so efficiently organized as those who could sell more cheaply, or represented that portion of the output that was produced at increasing cost per unit.[2] The manufacturer who was induced to sell at 18s., but could not sell at less, was the marginal producer. The cost which was worth incurring when the price was 18s., but would not be profitable if the price were less, was the marginal cost. Those manufacturers

[1] The difference between the amount that a purchaser might be prepared to pay and that which he actually does pay is usually described as a "consumer's surplus."

[2] See pages 45-47.

who, according to the schedule, could have sold the clocks for less than 18s., and still make a profit, did not undercut so long as people bought all their output at the higher price. They charged the same as the marginal producers, or, where the different units were produced at varying costs, at the figure indicated by the marginal cost of production. The clocks, then, were sold at one price, irrespective of the individual costs that might have been incurred. At that price there was a balance between demand and supply, and a coincidence between marginal utility and marginal costs, both as measured in terms of money.

The Time Element.

So far we have been considering price mainly as determined in the short period, during which the machinery and plant are more or less fixed. Should the price rise and producers desire, therefore, to increase their output, they can only do so in the short period by working their resources more intensively. But, however efficiently the works are organized, the output is necessarily limited so long as the technical equipment is not increased. The time required to erect new buildings and lay down new machinery would extend the short into a long period. There is no rigid distinction between the two periods, the respective lengths of which vary from industry to industry. For example, in the making of confectionery, for which an elaborate plant is not essential, a long period might consist of a few months, whereas in the building of ships, which necessitates enormous capital expenditure, a long period might run into years.

It was shown above that the price tends to equal the marginal cost of production. At any given time it would be true to say that price approximates to the

highest cost of production. But, as the period lengthens, manufacturers who were producing at less than marginal costs and so making large profits, extend their factories and probably reduce the selling price. The marginal cost of production thus falls, and what was originally the greatest cost may eventually become the least cost. It follows, therefore, that, *while the price tends to equal the highest cost at any particular time, it approximates to the lowest cost over a long period.*

In the short period the supply is less elastic than in the long period. The demand, however, may be very elastic at all times. If, in a short period, the stocks are more or less fixed, while the demand is comparatively elastic, the buyers will have a certain advantage over the sellers in bargaining, and consequently in determining the price. But, over a long period, the producers will be enabled to increase or diminish the rate of output, as circumstances require, and will, therefore, strengthen their power of bargaining.

We thus reach the conclusion that, although at all times demand and supply must interact to determine price, the intensities of the two forces vary in some degree according to the length of the period. In the short period the influence from the side of demand is comparatively strong; in the long period, the power of supply tends to become more pronounced.

Effects of Change in Demand.

Turning to the long period effects of changes in demand, we are now in a position to make certain modifications in our previous statement that a rise in demand causes an increase in price, and that a fall in demand causes a decline in price.

Two sets of conditions have to be borne in mind; first, the length of the period, and, secondly, the nature

of the returns in production. A rise in demand during a short period may be expected to result in an increase in price, for there is insufficient time to enlarge the stocks to any appreciable extent. A fall in demand may be expected to result in a reduction in price, particularly where the commodity is not of a durable character, or where it is subject to the vagaries of fashion, and consequently cannot be kept back for a future market.

Over a long period one has to consider whether the commodity is produced under increasing or diminishing returns. A rise in the demand for an article produced under increasing returns (or diminishing costs) will lead to an extension of output at a reduced cost of production per unit. Under competitive conditions the price, though it may have risen in the short period, may ultimately fall below the original level. A fall in the demand for an article produced under increasing returns will cause a restriction in the output, which, owing to the reduced capacity for efficient organization, will tend to raise the unit cost of production. The decline in price in the short period may be more than counteracted by conditions in the long run, and may thus give place to a rise in price.[1]

Where the article is produced under diminishing returns (or increasing costs) the opposite movements in price will tend to result. A rise in the demand for such a commodity can be met only by an increased cost per unit. The price, already raised in the short period, may thus remain at its higher level. A fall in the demand for an article produced under diminishing

[1] In practice, it is possible that a permanent reduction in the demand for an article produced under increasing returns would, provided that competition continued, result in the smaller firms going out of existence, and, with an increase in the size of the remaining firms, make eventually for lower costs and lower prices.

returns may bring about such a reduction in the unit cost, that the lower price of the short period may continue to be charged.

One concludes, therefore, that *while the immediate effect of an increased demand is to raise price, the ultimate effect, under increasing returns, is to lower it, especially if competition is effective; and that while the immediate effect of a fall in demand is to reduce the price, the ultimate effect, under increasing returns, is to raise it.* Under diminishing returns, the converse in the long period tends to apply. But, as we showed when dealing with the laws of non-proportional costs, diminishing returns are themselves mainly a short period condition. In the long run, owing to improvements in organization and the discovery of new processes, increasing returns tend to be the rule. The final price position is also dependent on the degree of competition or monopoly to which further reference is made below.

Joint Demand and Joint Supply.

Where two or more commodities are required together to satisfy a single want, there is said to exist a joint demand. For example, there is a joint demand for milk, sugar and tea, and for cloth, buttons and sewing cotton. The proportions of the units here are variable. There is a joint demand for rowing boats and oars, and for the canvas uppers and the rubber soles of tennis shoes. The proportions here are comparatively fixed. A commodity may be required in more than one joint relationship, and may be consumed for its own specific utility. Sugar, for example, is in joint demand for several different purposes, while it can also be used alone to render a direct satisfaction.

Where commodities are in joint demand, their respective prices are, to a certain extent, interdependent. The

price of, and therefore the demand for, cigarettes influences the demand for, and therefore the price of, matches. Where one article is practically useless apart from another, the price of the first commodity will be very largely influenced by the conditions affecting the second. Where, however, a commodity can be used in more than one joint relationship, and especially where it can be consumed for its own direct utility, its price will be more independent of conditions affecting the other articles.

Joint supply is in some ways comparable to joint demand, and is said to exist when a number of commodities are produced from a single source. There is, for example, a joint production of cotton, oil and oil cake, of hides, beef and milk, of coke, gas and tar. It is sometimes difficult to say which is the main product and which is the by-product. The price received for the total output approximates under competition to the costs of making the several products, but the price of each commodity separately depends on the respective conditions of demand and supply. Where the commodities can be produced in variable proportions, as, for instance, milk, cream, butter and cheese, an increase in the demand for one or two of them may be met by reducing the production of the others. But, where the commodities cannot be produced other than in fixed proportions, the only effective way of coping with a variation in the demand for one of the products, that is unaccompanied by an equivalent variation in the demand for the other, is to raise or lower the price of the product affected so as to make the two demands correspond. For example, should the demand for straw, which is produced jointly with wheat, fall off, the policy would not be to reduce the production of straw (unless it could be conceived to be the main product

instead of wheat), but to reduce the price in order that the existing stocks should be consumed. Where the joint products are of fairly equal importance, the problem is more difficult, and the producer aims at adjusting the total output, having regard to the elasticity of the demands for the different products, in such a way that his net profit is at the maximum. The Australian sheep farmer, before the days of refrigerating processes, used to depend mainly on his revenue from exported wool; the mutton used to be sold at home at an extremely low price. When the methods of freezing and chilling meat were invented, the sheep farmer exported his mutton at more remunerative prices than he had been receiving before. Eventually there was a fall in the price of wool in this country, and a rise in the price of mutton in Australia.

Monopoly Price.

Our analysis, so far, has been based, for simplicity, on the assumption that free competition is the rule. But, as we showed in a previous chapter, trade is subject to many frictional elements, the chief of which is monopoly.[1] Perfect monopoly is as rare as perfect competition, but the number of firms of a semi-monopolistic character is rapidly growing. Where the firms formerly in competition do not actually amalgamate their interests, they frequently associate for the purpose of regulating prices and fixing other conditions of sale.

We pointed out, when dealing with monopolistic organizations, that the power of the monopolist is not absolute. He can control the supply and leave the price to be determined by the general forces of the market,

[1] See pages 67–77.

or he can fix the price and leave the conditions of demand to settle the quantity to be disposed of. He cannot arbitrarily fix supply *and* price at any figure he chooses. His object is to make the maximum profit, not on each article sold, but on the sales as a whole. It is better, from his point of view, to make a shilling profit per unit and sell a thousand articles, than to make one and sixpence profit per unit and sell six hundred.

The optimum monopoly price is that which renders the maximum net profit. In practice, the price that the monopolist charges may be something above or below this level. He cannot, as a rule, experiment with one price after another until the figure is reached that yields the maximum net revenue, for continual alteration of prices is not good for business. The result may be that the price decided upon is not the one that a perfectly informed monopolist would choose. Or, perhaps, the monopolist does not want to attract too much attention, lest other firms should start in competition. Or, further, it is possible, if the monopolist uses his power too harshly, that the State will step in and control his activities, and even go to the extent of taking over the whole business.

Monopoly price is, of course, greatly influenced by conditions of production. If the monopolist is producing under increasing returns, and if the demand is sufficiently elastic, it may be to his advantage to reduce the price. For example, he may have been selling 1,000 articles a week, costing 8s. net to produce, and selling at 10s.; he would thus make a total profit of £100. If he reduced the price to 9s., the demand might rise to 1,800. If he were producing under constant returns, he would make a smaller profit than before, namely, £90. But, if the article were produced

under increasing returns, and, with the extra output, the net cost per unit fell from 8s. to 7s. 6d., he would make a profit of £135. Thus, where increasing returns are experienced, and the demand is of an elastic nature, the tendency for prices to rise on the formation of a monopoly may be counteracted.

The monopolist sometimes charges different prices for the same class of articles or service, discriminating between different customers according to their capacity to pay. One example of this method of charging is provided by the railways, which, as we mentioned in the previous chapter, provide excursion and similar special facilities at little over prime costs. If a firm has a monopoly in one country, but faces competition in another, it may charge different prices in the two regions. This would help to explain why some firms sell their goods more cheaply abroad than at home. A further reason might be that the ability of the foreigner to pay is not as high as that of the home consumer ; once more the monopolist fixes the price according to "what the market will bear."

2. MONEY AND THE GENERAL PRICE LEVEL

Relative and General Prices.

We have been dealing until now with the theory of relative or particular prices. While considering the forces that determine the power of exchange of one article for another, we have said nothing with regard to the level of general prices. The average price level may alter, yet the relative powers of exchange remain, in effect, the same. For example, general prices were

roughly twice as high in 1945 as in 1939; a book that formerly was sold for 2s. became priced at 4s.; the pencil that formerly sold for 2d. became priced at 4d. The prices, as measured in money, had doubled, but the exchange power of the respective commodities had remained fairly constant. A book was still equivalent to a dozen pencils, though the actual prices in terms of money had gone up.

In ordinary times general price movements are fairly slow, and money incomes are, as a rule, adjusted to the level of prices with little dislocation. Nevertheless, there are certain classes of people who benefit or suffer unduly when a change in the price level takes place. Thus, business men who enter into long-period contracts may be seriously affected if the purchasing power of money alters during the term of the contract. A shopkeeper, for example, undertakes to pay a fixed rent for (say) a period of ten years. Should general prices, including those he receives for his wares, fall during the period, he has to go on paying rent at a figure based on the previous higher prices, and therefore stands to lose. But a man who invests in a long-period loan at a fixed rate of interest stands to gain if general prices fall, for the constant money income from the investment has an increasing power of exchange. Should the principal be repaid when prices are still relatively low the investor gets back a larger equivalent in goods than he originally lent. (In all these instances, changes in taxation are for simplicity disregarded.)

A downward movement in prices is advantageous to creditors and injurious to debtors; it is beneficial to those who are due to receive fixed sums, and detrimental to those who have to pay them. An upward movement, on the other hand, is helpful to debtors and prejudicial to creditors. Rising prices are a disadvantage

to those whose incomes are fixed, or do not increase at the same rate. To those whose incomes vary in the same degree price variations are, of course, a matter of indifference.

Manufacturers benefit, as a rule, from rising prices, especially where they employ a large proportion of labour. As wages do not, in the majority of trades, keep pace with a rise in prices, the manufacturer is able to sell his goods at the higher prices, though his wages bill has not increased to the same extent. His rent and rates, too, may have remained constant. Further, since production is usually a lengthy process, the materials used have probably been bought at a lower price level than the one obtaining when the product is sold. Merchants and shopkeepers also benefit from the rise in prices, but, as they employ less labour and materials than manufacturers, their gains are not so pronounced.

Our account of prices would be incomplete if we did not examine the more important causes of movements in the general price level, or, in other terms, of variations in the purchasing power of money. The value of money, like the value of anything else, is determined by the interplay of demand and supply.

The Quantity Theory of Money and Prices.

If a given quantity of money exchanges for a given amount of goods, a certain general price level results. If the quantity of money is increased, while the amount of goods remains constant, or does not increase in the same degree, a decline in the exchange power of the money will tend to result ; each unit of money will now have less to do, and prices will tend to rise. If the quantity of money is reduced, while the amount of

goods remains the same, or diminishes to a smaller extent, an increase in the exchange power of money will tend to result ; each unit of money will now have more to do and prices will tend to fall.

This generalization of the interdependence of money and the level of prices is usually known as the "Quantity Theory." The price level is said to vary directly with the amount of money in circulation. If money supplies increase, prices tend to rise ; if money supplies diminish, prices tend to fall. We may illustrate this relationship by imagining, to begin with, a very simple community, which carries on no trade outside its boundaries, and is in every way self-sufficing. Suppose that an ounce of silver composes the monetary unit, and that there are altogether 1,000 such coins in circulation. Suppose, too, that there are 1,000 commodities offered for sale, all of which, for convenience, may be assumed to be of equal value. If the thousand commodities are exchanged for the thousand coins, it is evident that the price of each article will be equivalent to that of an ounce of silver.

Suppose now that a new silver mine is discovered, and that the coins increase in quantity to 2,000. Assuming, for the moment, that no increase takes place in the number of goods, there will be 2,000 units of money offered in exchange for 1,000 articles. Each commodity will now exchange for two coins instead of one. The general level of prices will thus rise by 100 per cent. Suppose, however, that the money supplies are for some reason cut down by a half. The thousand articles will now exchange against five hundred coins. Each coin will buy two commodities where it previously bought one. The general price level will decline by 50 per cent.

Arguing on such lines the early exponents of the

quantity theory maintained that prices vary in a direct proportion to the amount of coin in circulation. But this crude formula is subject to several qualifications, which will become obvious as we continue the example. Suppose that the rulers of our imaginary community hit upon the device of issuing paper currency to serve as legal tender alongside the silver coins, and that there are now in circulation 2,000 coins and 1,000 notes. We saw, when dealing with the subject of money, that paper currency may perform just the same work, within the national boundaries, as standard coinage. Thus, there will, in effect, be 3,000 units of money in circulation. Provided that the goods for exchange do not increase in the same proportion as the money, the price level will show a further rise.

To bring the community into closer accord with modern conditions, suppose that there develops a system of banking and credit. For reasons previously explained, the use of credit instruments adds to the amount of effective money. Thus, a manufacturer, requiring funds to carry on his business, may, on depositing his property deeds as security, be given the power to draw cheques to a prescribed amount. For practical purposes, his property may be regarded as being converted into purchasing medium. The cheques have power in exchange equal to standard coinage or paper currency, and will have a similar effect on the level of prices.

A further point to be noted in connection with the use of money is that the same unit is used again and again. A coin which changes hands on ten occasions in the course of a week exercises ten times as much " pull " on goods as a coin that changes hands but once. The " rapidity of circulation " adds, in effect, to the supply of money. To the extent that goods come back into the market after once being sold, their effective supply

is increased in a manner similar to that of money, thus providing a counteracting force to money's rapidity of circulation. But, whereas the repeated sale of goods is exceptional, the continuous exchange of money is its proper function.

General Prices and the Volume of Trade.

Money represents a demand for goods, and an increase in the effective amount of money tends, therefore, to raise the level of prices. It is equally true, however, that goods in the market represent a demand for money, and that an increase in the amount of goods, or the "volume of trade," causes the existing money to spread itself out, as it were, over a larger number of transactions. The existing quantity of money is in greater demand, and the exchange power of each unit tends to increase. An addition to the volume of production, therefore, tends to reduce the level of prices.

Thus, to return to our example, the tendencies observed towards a rise in prices might in practice be countered by corresponding improvements in the volume of trade. When the new silver supplies and the devices of paper money were discovered, prices would rise only to the extent that the money supplies went ahead of the production of goods. If production kept pace with the increased money supplies, prices would not rise; and if the volume of production increased at a faster rate than the money supplies, prices would even fall. Similarly, on the development of the credit system, the amount of effective money is undoubtedly increased, but if the production of goods is extended in proportion, the level of prices remains unaltered. The manufacturer who draws cheques, which represent an addition to money supplies, is enabled by these means to increase his output and so swell the volume of trade. Credit,

therefore, does not raise prices unless the borrower fails to put back into the market a volume of goods at least equivalent to the amount of the loan.

To sum up, the supply of money comprises the amount of coin, paper notes and credit instruments, multiplied by the rapidity of circulation. The demand for money consists of the volume of goods produced. The level of prices or, what is the same thing, the exchange power of money, is determined by the interaction of supply and demand. When the supply of money is relatively plentiful, its value is low ; when money is comparatively scarce, its value is high. The quantity theory, in its modified form, may be summed up in the statement that *the level of general prices varies directly with the amount and efficiency of money in circulation and inversely with the volume of trade.*

The Measurement of General Prices.

Fluctuations in the purchasing power of money are measured by means of "index numbers," which state the position of the price level at one period as compared with that at another. A particular year is chosen to serve as the basis of comparison, and the index number for that year is said to be 100. If, subsequently, the general price level rises by 15 per cent as compared with the standard year, the index number is quoted at 115 ; if it falls by 15 per cent, the index number is quoted at 85. Index numbers are constructed for different purposes. The index number of wholesale prices, for example, is not identical with that of retail prices of articles which enter into the ordinary cost of living. If we take September, 1939, as standard, we note that the cost of living index number had risen by 31 points by mid-1947, the index number being 131. Wholesale prices rise and fall more quickly than retail

prices; thus the wholesale index number (1938 = 100) had risen to 192 by September, 1947. (The disparity was to some extent accounted for by the subsidies on the retail prices on many articles entering into the cost of living.)

General prices may rise at the same time as the prices of particular articles fall. It is necessary, therefore, that the calculation of the index number should be based on the prices of a large number of representative articles. There is the difficulty, however, that all the selected commodities do not enter into consumption in the same proportion, and that, unless precautions are taken, the variations in individual prices may lead to an ill-balanced index number. For example, the average family expenditure on meat is fairly large, that on pepper very small. If meat showed a 25 per cent increase and pepper showed a 25 per cent decrease, and all other price movements were for the moment ignored, calculation by means of a simple average would give the misleading result that no change in the purchasing power of money had occurred. The difficulty is largely overcome by resorting to the device of "weighting" the different articles according to their relative importance in consumption. If, for instance, there were only two articles entering into consumption, and one of them was reckoned to have five times the quantitative importance of another, any rise or fall in the price of the first article would be multiplied by five before the average of the two was calculated. In a similar manner, all the commodities on which the index number is based are " weighted " in proportion to their estimated importance before the average is taken.

Index numbers are of assistance in measuring economic changes and in forming judgments on future trends. More particularly they are used in a number of industries

for adjusting wage rates to variations in the cost of living. In times of war and other emergency, when prices tend to be very unstable, index numbers are of considerable service in furnishing a check on the changes in the value of money, and a basis on which some degree of control can be exercised.

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CHAPTER VII

THE WAGES OF LABOUR

SYNOPSIS

1. *Wages and the National Income*

Emergence of the problem of distribution. The questions of the total income to be distributed, the nature of the shares, the amount of each share, and the apportionment among individuals within a group. For convenience the analysis is based not on persons but on factors of production. The national income is the national product; calculation of the national income; the shares going to services and property.

2. *The Theory of Wages*

Reasons for variations in relative wages: (*a*) varying productivity, (*b*) conditions of supply, (*c*) attractiveness or otherwise of occupation, (*d*) bargaining power, (*e*) protection from foreign competition, (*f*) custom and tradition. Nominal labour cost is the ordinary outlay; real labour cost from the workman's standpoint is measured by effort expended, from the employer's standpoint is measured by reference to output; a high nominal cost may be a low real cost.

The subsistence theory of wages; though apparently true a century ago, not borne out by experience; relation of subsistence to the standard of living; the latter an effect rather than a cause of the wage; subsistence theory deficient in attempting an explanation from the side of supply only. The wages fund fallacy; no pre-determined fund but a stream that is capable of indefinite increase; the wages fund theory ignores the possibility of higher wages leading to greater output. The work fund fallacy; no limit to the work to be done; work creates further work.

The theory of general wages; the price of labour is determined by the general forces of demand and supply. From the side of demand the wage in a given grade is limited by the marginal product, or, more correctly, since wages are an advance payment, the discounted marginal product; from the side of supply subsistence sets the minimum; the exact position between the upper and lower limits, set respectively by productivity and subsistence, is determined largely by the respective bargaining powers and by the policy of the employers.

3. *The Minimum Wage*

Special characteristics of labour: (*a*) must be delivered in person; (*b*) cannot be stored; (*c*) is comparatively immobile, owing to economic, geographical, social and artificial reasons; (*d*) is incapable of quick increase or decrease. Until recent years the State left the fixing of standard rates to the private bargaining between workers and employers, but in 1909 it first established wages machinery for "sweated" trades; the operation and effects of the Trade Boards Acts.

The "social" and the "economic" wage; the former determined by the customary standard of living, the latter by the wage-paying capacity of the industry, but the two are necessarily interdependent, especially over a long period. The case for a regular minimum; the difficulty of finding a suitable basis of wages for workers with varying numbers of dependents; the proposal for family allowances from central "equalization funds," made up of private payments or coming entirely from public sources.

1. WAGES AND THE NATIONAL INCOME

We began our study of economics with an account of production, and then proceeded to examine the principles of valuation. It remains for us to consider the nature of the social product, and the manner in which it is shared among the different sections of the community. The forces governing the distribution of incomes are in some ways akin to those determining prices in general. In the following chapters we shall consider the application of these forces, while noting also the special conditions that arise. In this connection the authoritarian factor in the fixing of wages is of particular importance.

The Problem of Distribution.

In an elementary society, in which people consume the product of their own labour, the question of distribution hardly arises. There is no classification of the people into employers, employees, capitalists and landowners. There is little or no co-operation, and no

complicated division of labour. There is no long period of waiting between production and consumption. Each producer owns his own materials and the necessary instruments, and when the article is completed there is no question of how much shall go here and how much shall go there.

Later, when a simple division of labour develops, the question of distribution becomes more difficult. Five men may go out fishing, and one remain ashore in order to sell the catch. How shall the proceeds be shared out among the six men? The problem is still comparatively simple if the men jointly own the boat in equal shares. But suppose that this is the property of a seventh man. What will determine his share of the total? The income of the group is now to be distributed, not simply on a basis of direct effort, but on a joint basis of effort and ownership. Suppose further that a middleman on shore buys up the whole of the catch and takes over the responsibility of finding a market? What will determine the price of his services?

When we come to the highly developed economic organization of the present day, the problem of distribution becomes more complex than ever. Manufacturers, merchants, landowners, farmers, investors, professional workers, artisans, public officials and a host of other claimants, all demand some share of the total volume of goods.

The study of distribution involves some of the most difficult and contentious problems in economics. It is sufficient for our present purposes, however, if we consider in general terms the following questions—

1. What is the total income that is to be distributed?
2. What is the nature of the shares of the social income?
3. What decides the share going to each group?

4. What determines the shares of individuals within a group ?

The first question is comparatively straightforward, and, though the estimates vary, permits of a fairly positive answer in statistical form. The second question involves inquiry into the character of wages, interest, profits and rent. The third question, and the most difficult, seeks the principles governing the amount of the shares paid out in the several forms of income, while the fourth question, which is closely bound up with the third, deals with the variations in incomes of different workers, different investors, different employers and different landlords.

If every individual income consisted exclusively of wages, or interest, or profits, or rent, it would be possible to analyse the distribution of the aggregate income on a personal basis. But such calculation is rendered difficult by the fact that a large number of people receive income of more than one type. A man may receive a wage and also an interest on invested capital ; an employer may make profits on his enterprise and also obtain rent on property that he owns. A shoemaker, who works on his own account in his own shop, possessing his own machines and tools, makes a gross revenue which can be broken down into the primary forms of income. It is found more practicable, therefore, in the study of distribution, to base the analysis on factors of production rather than on persons. The method is not without its drawbacks, but it permits of clearer presentation.

The National Income.

It was emphasized at the outset of our study that the division of economics under the heads of production, valuation and distribution is purely arbitrary, and is

made only for convenience of study. All forms of economic activity are so inter-related that changes in one department react throughout the whole of the economic structure. Innovations in the system of production, for example, are almost inevitably accompanied by alterations in the mode of distribution; changes in the scheme of distribution must have appreciable effects on the nature of production. There is the underlying fact that the amount of income to be distributed is necessarily limited by the amount that is produced. In short, the social income is the social product.

It is true, of course, that for a short time a nation, like an individual, may "live on its capital." It may use up its stocks of wealth at a faster rate than it produces new supplies, and thus temporarily enjoy an income greater than its product. Outwardly, the nation may appear well off, but the prosperity is not real. In war-time, for instance, the comparative affluence of certain groups of people is far from being a sign of general prosperity; for in reality, of course, much of the accumulated wealth of the country is being consumed. Ultimately, such a state of affairs must give way to depression, unless the volume of production is stimulated to keep pace with the rate of consumption.

The income of a nation, then, is largely determined by the amount of production within its boundaries. Merely to reckon, however, the full value of all the goods and services produced within a given period would grossly exaggerate the position, for in the process of production raw materials and other forms of wealth are ordinarily consumed. One should, therefore, deduct from the total value of the social product a sum corresponding to the goods used up in production, together with an appropriate amount for depreciation and replacement of capital. The net product thus

obtained is the national income, or, as it is sometimes called, the national dividend.

It was estimated by Dr. Bowley[1] that the net income of this country in 1880 amounted to a little over 1,000 million pounds. Of this total, 37½ per cent went to property and 62½ per cent went to services of all kinds. The income in 1913 was reckoned to be roughly double (the level of prices, and, therefore, the purchasing power of incomes, being similar to that of 1880), but the percentages going to property and services were practically the same as in the former period. Later Lord Stamp[2] reckoned the income for 1920 to be about 4,000 millions (but the purchasing power of money was less than half of what it had been seven years previously), and submitted that the relative proportions going to the different classes remained fairly constant. Mr. Colin Clark[3] estimated the home-produced income in 1935 to be about 4,300 millions, and the share of wage and salary earners to be about 65 per cent.

In recent years the Central Statistical Office of the Government has published with the Budget a White Paper called "National Income and Expenditure of the United Kingdom," which gives detailed information about the size, composition, and distribution of the country's income. According to this source the net national income was about £4,600 millions in 1938 and just under £5,000 millions in 1939. During the war years, owing partly to greater production but mainly to the rise in prices, the income in money terms steadily increased, and in 1945 was almost £8,500 millions.

During the war years the distribution of the national

[1] *Changes in the Distribution of the National Income, 1880–1913.*
[2] *Wealth and Taxable Capacity.*
[3] *National Income and Outlay, 1937.*

income changed to some extent in favour of wage and salary receivers. While rent, interest and profits increased from £1,589 to £2,835 millions, wages and salaries rose from £2,230 to £4,425 millions. The redistribution in favour of the wage earners was accentuated by the differentiated rates of taxation which bore very heavily on the larger incomes, by the extension of the social services, and by the cost of living subsidies which especially benefited the poorer classes. More is said about taxation as an instrument of economic and social policy in Chapter IX.

2. THE THEORY OF WAGES

The theory of wages will, for convenience, be studied in two parts. First, we shall examine the problem of relative wages, and endeavour to understand why earnings are higher in some trades than in others. Secondly, we shall consider the more comprehensive question of general wages, and observe the principles that determine the share of the social product going to labour as a whole. The two problems, however, are closely connected, and our account of the first will be incomplete until we have surveyed the wider field presented by the second. The determination of the share going to labour in general is, however, necessarily bound up with all the other forms of income, and it will not be possible, therefore, to come to any proper conclusion until the shares paid in interest, profits and rent have been investigated.

Relative Wages.

Why are the wages of the printer higher than those of the coal worker? And why does the miner, working at the face of the coal, earn more than the labourer at

the pit-head? Questions such as these are constantly arising, but the conditions obtaining in the different industries are so diverse that no single explanation can be found. The several factors noted below do not apply with equal force to all industries, for each group has its peculiar problems and is subject to varying degrees of "economic friction" or extra-economic influence.

(*a*) As a rule, the greater the productivity of a worker, the greater is his reward. Skilled work is, in general, more productive than unskilled; it yields a greater volume of goods and thereby makes it possible for a higher wage to be paid. Productivity is one of the most important factors determining remuneration of labour, and will be considered more fully at a later stage.

(*b*) Productivity is the central factor in the demand for labour, but we should also take into account the conditions on the side of supply. In those trades in which labour is plentiful there is a tendency for the wage to be relatively low. The wages of shop assistants and typists, for example, used to be low because of the large supplies of female labour. Women workers, for various reasons, rarely serve a period of apprenticeship, but flock largely into those trades in which the work can soon be learned. Where the supply of labour is excessive, and especially where the demand for labour is comparatively fixed, the actual wage may be appreciably less than the sum representing the worker's productivity.

Another consideration on the side of supply is the cost of learning a trade. A highly skilled worker defends his higher earnings on the ground that he has spent an appreciable sum in his younger days in preparing for his occupation. It is true that a certain proportion of the income obtained in the specialized trades can be set

off against the heavy initial expenditure incurred in obtaining the necessary qualifications; but, as a rule, the extra remuneration in the trade that entails an expensive training is far more than sufficient to pay back, with interest, the initial outlay. A man whose training cost £1,000 would consider himself underpaid if his annual income were only (say) £100 in excess of what he could have earned by entering an open trade which required no preliminary expenditure. The extra earnings of people in occupations involving a large expense before admittance are in a measure akin to monopoly revenues, whose nature we have yet to examine.

(*c*) The attractiveness of the occupation influences to some extent the relative rate of wages. Where a task is disagreeable or dangerous the worker receives a higher wage as a form of compensation. A steeplejack, for instance, gets a relatively high payment for his services. Also, where the employment is irregular, the rates per hour or per day may be high compared with those obtaining in other occupations. Thus, the bricklayer, whose earnings depend partly (though not so much as formerly) on the weather, receives a somewhat higher time rate than would probably be paid if continuous employment throughout a season could be assured.

It is not suggested, however, that all trades in which the work is unpleasant, or dangerous, or irregular, pay relatively high wages, while occupations in which the work is agreeable pay relatively low rates. Frequently the very opposite is experienced. The reason may be a higher productivity of the more pleasant work, or a more plentiful supply of labour for the less attractive work, or it may be found in the factors still to be noted.

(*d*) The bargaining power of the worker has an important bearing upon the rate of wages. In the absence

of a trade union the employer, with his greater reserves, has a distinct advantage in bargaining over the individual workman, who cannot keep back his labour for a better price. The workers in some trades have a more efficient bargaining organization than they have in others, and are thus in a position to press for and obtain higher remuneration.

(*e*) In recent years we have heard a great deal of the "sheltered industries," which are not confronted directly with foreign competition. Where the employees have to contend with lower-paid workers in another country, there is a tendency for the wages to fall, unless, by superior methods and organization, the productive capacity of the better-paid workers is improved. Where the goods are sold at home in competition with foreign imports, the position may be eased by means of a protective tariff, though where the commodity is sold abroad in open competition with foreign goods the remedy is not so simple. The "sheltered industry" argument, however, is subject to certain modifications, for the conditions in one industry tend to react on those in another. Thus, if the coal mining and steel industries are depressed, the traffic on the railways is naturally affected; however "sheltered" an industry may be, its prosperity is not independent of conditions prevailing in less favourably placed industries.

(*f*) Custom and tradition are responsible, in some degree, for the continued differences in relative wages. There is a tendency for people to become habituated to certain standards of life, based upon the respective rates that were paid in former times. The skilled man may get fifty per cent more than the semi-skilled worker. Originally the additional amount may have measured the extra productivity, or it may have been due partly to superior bargaining power. But, with the growing use

of automatic machinery, the productivity of the semi-skilled worker may have approached more closely to that of the skilled man, yet without a corresponding alteration in the rates of pay. In recent years, however, the power of custom and tradition has been somewhat diminished. Owing partly to the weakening of this restrictive force, and partly to the spread of trade unionism, which is no longer confined to the skilled workers only, there has been of late a distinct levelling-up of earnings of the skilled and semi-skilled grades.

To these factors which account to some extent for variations in earnings should be added the differences in marginal productivity, which will be noted later in the chapter (page 164).

Nominal and Real Labour Cost.

It is important to the economist and the business man alike to realize the distinction between the nominal and the real cost of labour. The nominal cost, by which is meant the ordinary outlay on labour, does not necessarily vary in proportion with the real cost.[1] The latter can be viewed from the standpoint of either the workman or the employer. The real cost to the workman embodies all the efforts that he has expended in the performance of a task. The significance of the distinction becomes even clearer over a period of time. The work may be of such a strenuous or unhealthy nature that the length

[1] These terms should not be confused with nominal and real income. Nominal income is measured in terms of money: real income is indicated largely by what the money buys. The general level of prices is here the dominant factor. Similarly, we should take account of any perquisites in kind or special facilities and privileges attaching to one's position.

of a man's working life is shortened. Some occupations are of a comparatively light character, and a man may continue at his work for forty years or more, and still retain all his productive faculties. Other trades are such that the average working period is ten years less. If the same weekly wage is paid in the two trades the nominal costs are equal; but if one of the occupations soon brings about physical exhaustion, and eventually reduces a man's working life, the real costs, from the workman's standpoint, are very unequal.

From the employer's point of view, the real cost is reckoned in terms of output. If two men in a single trade receive the same wages, but one of them turns out a greater product, his real cost to the employer per unit of output is obviously less than that of the other man. One man may receive a higher wage than another, yet the real cost to the employer be less in comparison. He may perform his task more rapidly or with greater accuracy; this advantage, coupled with the spreading of the overhead charges over a larger volume of output, enables the employer to sell the product at a lower price despite the heavy wages bill. Lancashire operatives receive very much better wages than those performing similar work in the factories of Bombay. But the efficiency of the English worker is so high, compared with that of the Indian operative, that the real labour cost in England is much smaller than the nominal figures would suggest.

The case for a minimum wage for badly-paid workers is supported by the common experience that the real cost to the employer is not necessarily increased. Investigation of the operation of the early Trade Boards showed that the workers affected often gained so much in physique and productive capacity, as a result of

the better wages, that their output increased in the same proportion, and sometimes even more.

The argument resembles that in favour of the reduced working day, which we noted in a previous chapter. There is a certain stage in both wages and hours at which the productivity of the worker is at its optimum. Beyond this point the output diminishes. We saw that, up to a point, a diminution in working hours tends to increase the efficiency of the worker during the hours he remains at work ; but once that point is reached the productivity declines. An increased wage may have a similar effect, in so far as the inducement for a man to work very hard is reduced, or to the extent that he prefers working fewer hours at the old weekly wage to working the same number of hours as before at an increased weekly wage. Wages and hours are closely interrelated, for a reduction in hours at the same weekly wage as before is equivalent to an increase in the rate per hour. The two must necessarily be studied together.

The Subsistence Level and the Standard of Life.

The economists of a century ago, in accordance with the general cost of production theory of prices, endeavoured to explain the remuneration of labour on a similar basis. The "cost of production" of labour, they argued, was the amount of food, clothing and shelter necessary to maintain a workman and his family. Hence there arose the superficial doctrine that the wages of labour are determined by the cost of subsistence. If wages were higher, the population would increase, and competition among the labourers would force wages down ; if wages were lower, the lack of subsistence would cause a reduction in the numbers of the people, and, with a diminished supply of labour, the wage would

rise. It must be admitted that this cheerless doctrine reflected the circumstances of the times. The factory system was being developed and extended without any adequate supervision of working conditions or regulation of wages, and the plight of the artisan was unenviable. It was only too true, for the majority of the workers, that their wages were hardly sufficient for the bare necessaries of life. Even at the present time the theory would seem to be borne out by the low wages paid in the eastern countries and elsewhere.

This " iron law " of wages, which was instrumental in earning for economics the title of " the dismal science," held out to the workers little hope of improving their conditions and status. The experience of the last hundred years, however, has largely discredited the theory. The wages of the average worker are considerably above bare subsistence level. In the three decades before the first world war the actual receipts of the wage-earning class increased by roughly a third. The doctrine, therefore, that wages cannot permanently rise above the level of subsistence is not in accord with the facts. It rests on the false assumption that an increase in wages must inevitably be followed by an increase in population, but the tendency nowadays is just the opposite. With the undisputed rise in the general standard of living there has been a marked reduction in the rate of population increase.

The subsistence theory throws no light on the problem of relative wages. Does one type of worker get more than another merely because his physical needs are greater? And what is the relationship of subsistence to one's actual standard of living? The standard of living is not in itself the determining factor, but is largely the result of the wage received, and over a long period may vary considerably. A movement in wages is soon followed by

a corresponding change in the form of one's expenditure. The standard of living at the present time is appreciably higher than it was a century ago; but it is the outcome, not the cause, of the higher level of wages. It is begging the question, therefore, to say that one class of labour receives a higher wage than another because its standard of living is higher. In fact, it is neither the standard of living nor the cost of subsistence that determines the wages. To some extent, it is true, productivity is influenced by the standard of living, but many other factors have to be taken into account. The nature of the demand for the product, the state of industrial organization, the efficiency of the employer, the ratio of labour charges to total production costs, the bargaining strength of the worker and the power of his union, all these have a bearing upon the rates of wages, irrespective of the cost of subsistence or of the customary standard of living.

In short, the subsistence theory of wages, like the contemporary cost of production theory of prices, is deficient in that it attempts to provide an explanation from the side of supply only. The price of labour, like the price of anything else, is dependent as much on conditions of demand as on those of supply. All that we can say for the present is that wages cannot fall for any length of time below subsistence level, but they may, and do, rise considerably above it. Subsistence sets the minimum, but we have yet to ascertain what determines the maximum.

The Wages Fund and the Work Fund Fallacies.

We occasionally come across the argument that an increase in the wages of one set of workers must necessarily be at the expense of other workers. The origin of this belief lies in the wages fund theory, which, although generally discarded by economists of to-day, still persists

in some people's minds. According to this theory, there was supposed to be at any time a fixed capital fund, pre-determined by past production, for the purpose of paying wages, this fund constituting in effect the demand for labour. There was also supposed to be at any time a fixed supply of labourers requiring employment. Under competition, so it was argued, wages in general could not rise unless the fund were increased or the number of workers were diminished, nor could they fall except by a reduction in the fund or an increase in the number of labourers. If wages were increased at the expense of profits, investment would be less remunerative and the supply of capital would fall off, resulting eventually in a contraction of the fund. Wages in particular trades might increase, but, it was maintained, the gain would be offset by reductions in wages elsewhere, or, if the increase came out of profits, the supply of capital would be restricted, and ultimately the workers would be no better off than before. A common criticism of the trade union movement in the third quarter of the nineteenth century was that any wage improvements obtained by the more powerful workers' organizations meant almost necessarily a reduction in the wages of other workers. Many of the trade union leaders themselves were imbued with this idea, and pursued an extremely cautious policy in consequence.

When first formulated the wages fund theory appeared to contain a large element of truth, for industry was rapidly developing and the importance of capital as a factor of production had come to be recognized. It seemed feasible that, as the individual employer paid wages apparently out of a fixed stock of capital, there should be a pre-determined fund from which all wages were paid. What the advocates of this theory failed to realize was that the capital fund, in so far as there was a

fund at all, was itself the product of labour, and was by no means as rigid as it was supposed to be. If, by improved organization or other means, the social product were increased, there would be as a result a larger fund available for wages. Indeed, an addition to a man's wage, if it improved his productive faculties, might come entirely out of the extra output, without in any way encroaching on the original fund, and thereby on other people's incomes. The advocates of the wages fund theory failed to distinguish between the nominal and the real cost of labour; they did not realize that increased wages, accompanied by efficient management, might swell the stream of social income to the advantage of the whole community.

Finally, if the theory were true, one would expect that, in "new" countries, where the capital supplies are comparatively short, wages would be low, while in "old" countries, where capital is fairly plentiful, wages would be more generous. Yet experience has frequently shown the opposite to be true. Newly-developed areas, with relatively small capital funds, often pay better wages than old-established countries, where capital is easily available. The prosperous "new" countries pay relatively high wages, not because they have a large wages fund, but because, among other reasons, the productivity per head is greater.

Though, perhaps, it does not bear directly on the present question, the somewhat similar fallacy of the work fund may be mentioned. We often encounter the belief that the amount of work to be done is limited, and that therefore any extra employment for one set of workers must cause under-employment, or even unemployment, for others. Arguing on these lines some maintain that the unemployment problem would be solved merely by a reduction in the working hours of

those already employed. In special trades, such as shipbuilding or road construction, the amount of work does appear to be limited, but it is conceivable that, if the costs and therefore the price were reduced, the demand for new ships and roads would increase, thus providing further employment for labour. In the production of ordinary articles it is more than likely that an increase in the output at a lower cost of production would be accompanied by an increase in the demand. Work creates further work. When a large number of people are unemployed their purchasing capacity is so small that the demand for other people's services is adversely affected. A diminution in the number of unemployed means a greater spending power, and therefore improved conditions of employment elsewhere. And, in so far as workers are engaged in making capital goods, they are producing the means whereby other people will be employed.

We may note here the inconsistency of arguing, as some do, that a reduction of working hours is desirable for two reasons; first, because the efficiency of the worker will be improved, and therefore no diminution in output need accrue, and secondly, because it will provide openings for the unemployed. Either one or the other of the two results may be attained, according to the particular circumstances, but they cannot both be achieved, provided that all other conditions remain unchanged. For if there is no reduction in output, there is obviously no demand for new labour; and if new labour should be required, there has evidently been some falling-off in output.

The Theory of General Wages.

The earlier theories of wages gave insufficient attention to the productivity of the worker. Eventually it became

recognized that wages, far from being restricted in the manner already described, were capable of variation in proportion to the efficiency of industry. In other words, it was realized that wages, like all other forms of income, are derived from the social product, and that if, by improved methods and organization, the volume of production is increased, an addition to all forms of income is thereby made possible. According to the modern theory the shares going to the several agents of production are determined in no exceptional manner by the interaction of demand and supply. Labour is vested in the human being, yet it is bought and sold in the market like any ordinary commodity. It is true that there are many special conditions attaching to the employment and payment of labour, such as are imposed by factory and minimum wage legislation, and these will be noted more fully below. Nevertheless, after all these circumstances are taken into account, the fact remains that the price of labour is largely subject to the general forces of valuation that we have noted in a previous chapter.

From the side of demand wages are governed by the productivity of labour. An employer, like the average purchaser, will not pay more for a thing than he considers it to be worth to him, but he will pay less for it if he has the opportunity. The productivity of labour sets the maximum on a worker's wage. To say, however, that wages, from the side of demand, tend to equal the productivity of labour is not sufficient, for, it may properly be asked, *whose* productivity determines the rate of pay ? The answer is provided by reasoning similar to that advanced in the chapters on prices. The counterpart to marginal utility is, in this case, marginal productivity, and it is to the marginal productivity of labour that the wage tends to conform.

Suppose, for example, that a manufacturer employs

so many units of labour and so many units of capital goods. He seeks a combination of factors in just those proportions that will yield him the greatest net return. He may decide on a little more labour and a little less machinery, or a little less labour and little more machinery. The proportions he uses depend upon the respective productivities, so far as they can be measured, and upon the prices he has to pay for the factors. The employer has also to consider whether the returns, in proportion to outlay, show an increasing or a diminishing tendency, and has to take into account to what extent the economies of large-scale production will be offset by the reduced selling prices that are likely to follow a greater output. He will continue to employ further labour so long as there is a net addition to his profit. But at a certain point the employer finds that to take on another man adds nothing to his profit. Either the returns have fallen to the level at which there is no profit, or the selling price has dropped to the lowest practicable figure. If he is perfectly informed, the employer will not take on men beyond this point. If he stops before reaching this stage he will not be gaining the greatest advantage; if he still continues to employ labour he will be paying labour more than its worth to him. The worker whom it is just profitable to employ may be described as the marginal labourer. As all the men in a given grade are assumed to be of equal ability, the wages per worker cannot vary. Though the specific output per batch of men employed may increase or diminish, the units of labour are identical. In accordance with the general principles of valuation, the wages of the workers thus tend to approximate, on the side of demand, to the specific productivity of the marginal worker.

The employees, however, do not wait for their wages until their products are marketed and paid for. Wages

are an advance payment, and if the employer paid out in the present a sum fully equivalent to the marginal product, he would have to pay interest on the money laid out until the time when he received payment from his customers. He therefore deducts an appropriate sum from the value of the specific product, and gives the workers the " present worth " of their services. Thus the wages of a given grade of workers tend to equal their " discounted " marginal product.

The extent to which this tendency becomes operative depends, of course, on the state of competition. In actual practice such " frictional " elements as the immobility of labour, the influence of trade unions and employers' associations, as well as the protective legislation of the State, may prevent the wage from being determined in this manner. It is sometimes desirable in the public interests that a certain restriction should be placed upon the operation of economic forces where their incidence appears harsh and inequitable. Especially where the bargaining capacities are unequal it is desirable that some check should be imposed upon the more powerful party.

We may now revert to the factors governing wages from the side of supply. It has been shown that prices of material commodities are largely influenced, especially over a long period, by their cost of production. Though, in the usual sense, there is no " cost of production " of labour, the principle can be applied within certain limits. The expenditure on food and other necessaries for the maintenance of working efficiency may be likened to the cost of producing labour. Subsistence, we have seen, serves as the minimum below which wages cannot fall for any length of time. But, unlike ordinary commodities, labour has a price that tends permanently to rise above its " cost of production,"

and the difference between bare subsistence and the actual wage tends to widen as economic and social conditions improve.

With the aid of the marginal theory we can amplify our previous account of relative wages. In those trades in which the supply of labour is comparatively plentiful the productivity of the marginal labourer is small, and the wages tend to be low. Where the supply of labour is relatively scarce the marginal product is greater and the wages tend to be higher in proportion. Also in "new" countries, where there is a scarcity of labour in proportion to land and capital, the marginal productivity of labour is high and so are wages. In some "old" countries, where there is an ample supply of labour, relative to the other factors of production, it is employed on tasks involving comparatively low productivity; the marginal product has but little value, and wages are low.

The problem of wages is so vast and complex that it has been impossible in these pages to do more than indicate the main governing influences. We have shown that wages cannot for any length of time fall below the level of subsistence. The standard of living is more comprehensive than subsistence, and is not in itself a factor that determines the wage. On the other hand, wages cannot rise beyond the amount that measures the worker's productivity. Where the industry is efficiently organized, the productivity and the theoretical maximum of wages will tend to be at a high level. The exact position of the wage between the minimum and the maximum is determined largely by the respective bargaining powers of the two parties to the contract. Where trade unionism is strong the wage approaches the upper limit; where it is weak the wage may be little removed from subsistence level, unless the

State intervenes or the employers, of their own accord, recognize and take advantage of "the economy of high wages."

3. THE MINIMUM WAGE

Special Problems of Labour.

Although, as we have already pointed out, the wages of labour are subject to the same general forces that govern the prices of ordinary commodities, there are certain peculiarities in the demand for and the supply of labour that cause us to regard its price determination as a distinctive problem. The primary fact that labour is inseparable from the worker, and is the means whereby the vast majority of the people earn their livelihood, often raises special considerations, and under certain conditions justifies public intervention in the face of the ordinary tendencies of demand and supply.

(*a*) Unlike the seller of a tangible product, a worker must deliver his goods in person, and is, therefore, deeply interested in the conditions under which his "commodity" is employed. The shopkeeper sells his wares over the counter, and does not usually inquire whether they are well or ill used after they leave his premises. But a workman is personally concerned with the environment of his employment, with the lighting and heating, with the sanitation and other amenities. Where he has the choice he will sell his labour to an employer who gives good working conditions in preference to one who does not pay great heed to the welfare of his employees. The insistence, too, of the State that employers shall observe the regulations of the Factory Acts and other forms of social legislation, puts labour in a different position from that of commodities ordinarily bought and sold.

(*b*) Another peculiarity of labour arises from the fact

that it cannot be stored. It represents a flow of energy, which cannot be held back, or allowed to accumulate, and then be sold at a better price. It thus resembles an extremely perishable commodity, which has to be used at once or be lost for ever. The fact that " labour will not keep " places the worker at a disadvantage in bargaining with an employer, who usually has greater reserves to fall back upon. It is impossible for the workman to keep back his wares for (say) a month until the wage improves and then give two months' labour in one. It is true that by strike action the workers may refuse to sell their labour at a low wage, and, should they be successful, eventually return to work at a higher remuneration. But the labour power that has been dissipated in the period of the strike can never be reclaimed.

(*c*) Labour, compared with ordinary goods, is very difficult to move from one purpose or direction to another and, in consequence, the labour market is far from perfect. Whereas a material commodity can, as a rule, be readily shifted to the place where it commands the highest price, the supply of labour is not so easily adjustable. The immobility of labour is due to several factors. First, with the growing complexity of modern production and the prevalent subdivision of functions, the average workman becomes proficient in a single specialized task. Through reasons of unemployment, or the desire to earn higher wages, he may wish to enter another trade, but, owing to his particular training, he has not the requisite ability for the new task. This immobility may be described as economic.

Secondly, there is a geographic immobility as between one district and another. The cost of movement may be a serious item, especially if the worker has to convey a houseful of furniture and other belongings. Then

there are personal and sentimental reasons tending to hinder free movement. The worker may be loth to leave the district where he was born and reared, and to migrate to a place where he will feel himself a stranger. The normal immobility of labour from one country to another is further accentuated by restrictive immigration laws.

Thirdly, there is an immobility due to social and artificial causes. Thus, the possession of a certain amount of wealth is still a preliminary condition of entering some of the professions. Similarly, the restrictions often imposed by trade unions and employers' associations provide an effective obstacle to perfect mobility. Limitation of entry into certain occupations may be laid down by the State in the public interests, such as, for example, the requirement of examination and other qualifications in professions such as medicine.

(*d*) An additional characteristic of labour that distinguishes it from the ordinary commodity is that an increase or decrease in the price does not, as a rule, influence the supply until a considerable period has elapsed. The population, and therefore the supply of labour, grows very slowly. High wages in all trades may continue to be paid, yet (in the absence of immigration) the labour may not be adequately increased for a generation or more. On the other hand wages may be low, yet the supply of labour may remain undiminished, and in fact may actually increase.

Minimum Wage Legislation.

The position of the worker has been improved through the medium of both the trade union and the State. For upwards of a century the State has regulated hours and working conditions, but until comparatively recent years it left the fixing of standard rates entirely to

private bargaining between employers and employed. Trade unionism, however, during the nineteenth century was mostly confined to those skilled workers whose wages were sufficient to afford the necessary contributions towards the union's funds. Many of the skilled and practically all the unskilled and women workers were badly paid, and, although a certain number of them were brought into the unions towards the end of the century, a large proportion remained wholly unorganized and received extremely low wages.

The evil conditions of the " sweated " trades aroused public sympathy, and in 1909 the first Trade Boards Act was passed, which established wages boards in each of four trades—chain-making, tailoring, paper-box-making and lace-finishing. The boards were composed of equal numbers of employers' and workers' representatives, together with a small number of members appointed by the Government. Each board made a full inquiry into the position of the trade it was concerned with, and laid down minimum rates that were to receive the force of law. The new rates were considerably above those previously paid, but subsequent experience showed that the higher wages, by improving the stamina and efficiency of the workers, and also by inducing a better organization, remained well within the capacity of the employers. The operation of the Act was so successful that in 1913 four more trades were brought within its scope, and the results were found to be no less beneficial.

In 1918 another Trade Boards Act was passed, but this time there was an important change in policy. Hitherto the trades catered for were of a " sweated " nature; the workers had no bargaining body, and their wages were extremely low. Under the new Act trade boards could be set up in industries in which the conditions were

not so poor. The intention was largely to stimulate the formation of bargaining machinery on the part of both workers and employers. Over sixty boards were set up in the course of four years, regulating the wages of about three million workpeople. The subsequent depression, however, caused the high rates of the trade boards to be criticized in certain quarters, and a Government Committee was appointed in 1921 to investigate the position. In its report the Committee, while not unfavourable to the general principle of a minimum wage, recommended that the operation of the Acts should be confined to cases where the rate of wages prevailing in the trade was unduly low as compared with that in other employments, and where no adequate machinery existed for effective wages regulation. No change, however, was made until the passing of the Wage Councils Act of 1945, which replaced the previous Trade Boards legislation. The new Act authorized the Minister of Labour and National Service to set up a Wages Council in any industry with powers to propose regulations fixing wages rates and holiday periods with pay. Existing Trade Boards became Wages Councils. Under the Agricultural Wages Acts separate provision was made for farm workers.

The " Social " and " Economic " Wage.

In formulating minimum rates, a wages council or any similar body has to choose between two policies. It can lay down rates which it considers necessary to provide a minimum standard of living, or it can determine the wage entirely by reference to what the industry can afford to pay. The former policy is the more heroic, implying, in effect, that if an industry cannot provide an adequate wage, it is parasitic in character and ought not to be continued at the expense of underpaid labour.

The other policy is more practical and opportunist. It recognizes that unemployment may be caused if the wage is fixed at a higher standard than the industry can afford to pay, and therefore aims at a minimum that is consistent with the continuance of the industry, though it also takes into account the possibility of increased rates leading to greater output and, therefore, to a greater wage-paying capacity. The wages legislation in this country has been inspired by this latter policy. Under the Trade Boards Act, for example, no general minimum was proclaimed, but each board was instructed to ascertain the best rates that the particular industry was able to pay.

The distinction between the two policies is in some ways similar to the one drawn between the "social" and the "economic" wage. The "social" wage is that which is determined largely by the customary standard of living, and is influenced to some extent by the remuneration paid in other industries. The "economic" wage is that which the industry, under given conditions, can afford to pay. Neither the "social" nor the "economic" wage is fixed. The "social" wage in progressive countries shows a distinct upward movement, for the standard of living is constantly improving. As already indicated, the rise in the standard of living is the result of improved industrial efficiency, and is therefore the outcome of a greater "economic" wage. The two tend to converge over a long period. No industry can pay in wages more than is represented by the productivity of the workers employed. But if wages varied directly and immediately with changes in the prosperity of the employing body, serious fluctuations in the workers' incomes might result. A regular wage of (say) £6 per week for a year or two is better for a workman and his family than £8 per week for several months and then £4

per week for another period, even though the total income in either case may reach the same figure. With a regular income, it is more possible to estimate future expenditure and make one's plans accordingly. Regular habits are encouraged; there is no temptation to spend unwisely during times when wages are high, followed by regrets during times of depression. Serious fluctuations in wages may ultimately have detrimental effects on the worker's character and efficiency. Thus, it is of economic advantage to employers, as well as to the workers, that the wages should be as regular as possible.

A strong argument can be adduced in favour of a scheme whereby the workers are guaranteed a regular minimum wage, provided that an arranged proportion of the gross income of the industry is set aside in good times to make up the minimum in bad times. When the industry is making high profits the wages might rise by a certain amount, but a sufficient reserve should be left over in order to ensure that the minimum wage would continue to be paid should the industry for a time fail to make a profit. The wage in good times would not be as high as the specific productivity, but in bad times it would be greater. Such an arrangement would be, in effect, but a special form of insurance.

If the minimum wage is to be influenced by the customary standard of living the difficulty of finding a suitable basis immediately arises. Under the present system of remuneration the single man receives the same wage as the married man, there being no gradation of income according to the number of dependants. To fix the wage by reference to the requirements of the single worker would obviously be unfair to the married man. To take as the basis the requirements of the married man with large family obligations and pay all workers

indiscriminately on this scale might prove ruinous to the employers. Yet to have different rates, according to the number of dependants, would not be desirable, for the single man would then receive preference in employment over the married man.

A plan which, it is claimed, would solve these difficulties and which has received much support is that of family allowances. It is submitted that all workers in an industry, single and married alike, should receive the same rates from their employers, but that those workers with family obligations should receive from a central fund additional amounts according to the number of dependants. This central fund may be derived from contributions of the constituent firms in proportion to the number of employees. Each industry, or group of industries, may have its own scheme. Some would prefer, on the other hand, that the family payments should come entirely out of the revenues of the State, and the recent institution of children's allowances is a step in that direction. But whether the "equalization fund" comes from private or from public sources, the method of family subvention would represent a distinct departure from previous practice. So far, wages have been paid mainly on a basis of productivity, modified to some extent by the bargaining powers of the two parties. Schemes for family allowances, however much the proposals might differ in detail, place a greater emphasis on the worker's needs as a wage-determining factor than has hitherto been deemed practicable.

CHAPTER VIII

INTEREST, PROFITS, AND RENT

SYNOPSIS

1. *Interest and Profits*

Gross interest may consist of a compensation for risk, a reward for trouble and inconvenience, and a net payment for the services of capital, described as net interest; net interest tends to equality; there may also be an element of "quasi-rent" in the gross return. The institution of interest has provoked much controversy from earliest times; socialistic views on capital and interest. The determination of interest; productivity is the central factor on the side of demand, "abstinence" or "waiting" on the side of supply; the "psychological theory" that interest is "the price of time"; the rate of interest is determined at the point at which marginal "cost" (forbearance) and the marginal "utility" (productivity) are balanced.

Gross profits may consist of net interest, a "wage of management," a reward for risk, and, so far as it can be assessed, a net or pure profit. The rate of profits per unit sold should be distinguished from the rate made over a period of trading. Profits of the same firm vary from time to time, due to either internal or external causes; they vary from firm to firm within an industry, owing to differences in the quality of management and to fortuitous circumstances; they vary from industry to industry, owing to differences in the degree of risk, in the nature of the returns in production, and also in the intensity of foreign competition.

2. *Economic Rent*

Economic rent distinguished from ordinary "hire" rent; not always practicable to demarcate between rent of land and interest of capital sunk a long time ago. Rent of fertility; the Ricardian theory; rent determined by the difference between the productivities of superior and marginal land; in theory marginal land bears no rent, but in practice the true position may be concealed; the "no-rent" land may be in another country altogether; rent and diminishing returns; the "extensive" and the "intensive" margins of cultivation; the more productive "doses" of capital and labour bear a rent over the

marginal " dose." Diagrammatic representation of rent. Rent of situation ; the productivity of relatively inaccessible lands has to be discounted by the cost of bringing the crop to market ; site rents in towns. Rent is determined by price, not price by rent ; high rents need not be accompanied by high prices, if the turnover is sufficiently large.

3. *Rent and Distribution*

Economic rent is a payment for a factor of production which does not increase or diminish in supply according to alterations in the payment ; the productivity does not depend upon the rent, but rather the rent depends on relative productivity. Elements resembling rent are found in gross interest, profits and wages. In a short period invested capital may receive a " quasi-rent," which tends to disappear in a long period. Firms may obtain a " quasi-rent " in the gross profits, owing to situational and other advantages that are not due to specific effort on the part of the owners. Similarly, a " rent of ability " may be observed in the incomes of people who possess special abilities and whose services are in great demand.

General view of distribution and production ; all forms of income are necessarily interdependent, and are studied separately only for purposes of analysis ; distribution as a whole cannot be considered apart from production ; the theoretical division of the social income among the factors of production in proportion to their specific contributions is subject to many " frictional " and non-economic forces ; an increase in the social product is conducive to, but does not necessarily result in, greater prosperity and happiness of the whole people ; re-distribution might increase welfare, even without an increase in the volume of production ; the presence of " unearned increments " of various kinds militates against an ideal system of distribution ; but even with the most equitable scheme of distribution, there would still be need of more efficient and more extensive production.

INTEREST, PROFITS, AND RENT

In this chapter we continue our survey of the distribution of the social product. The account of wages is left incomplete until the other forms of income have been considered, for the share going to labour is necessarily influenced by the amounts paid in interest, profits and rent. It will be shown in the following pages that the prices set upon the services of capital, enterprise

and land are, with certain modifications, subject to the same general forces of valuation that influence all economic activity. The study of rent, which is a form of monopoly revenue, gives rise to new problems, which, on first examination, seem to place the return to land in a distinct category. On further inquiry, however, it becomes evident that payments closely resembling rent are commonly found in all other forms of income.

1. INTEREST AND PROFITS

The Meaning of Interest.

Interest, as ordinarily employed, is a comprehensive and an ambiguous term. We speak of the interest on public loans, on industrial investments, on bankers' overdrafts and on pawnbrokers' advances. But the charges paid for the different services vary enormously. The rate on Government stocks is usually lower than that paid on company shares, which, in turn, is less than that charged by the pawnbroker or the moneylender. The relative rates of interest, in the everyday sense of the word, are even more liable to variation than the rates of wages in different occupations.

Why does the gross interest, as the inclusive return to loans and investments may be called, vary so much? One obvious factor in the problem is the element of risk. A man who receives a large dividend on an investment in South American stocks would probably attempt to justify the size of the return by pointing to the risks involved in the outlay. Possible changes in governments which are liable to repudiate the debts of their predecessors, together with the uncertain conditions of trade in undeveloped countries, might make the payments of dividends somewhat precarious. The average investor prefers a modest but safe interest to

one that is greater but liable to serious fluctuation. Thus there is in gross interest an item which may be likened to an insurance against risk.

A second factor influencing the rate of gross interest is the trouble involved in advancing the capital and collecting the payments. A pawnbroker, for example, apart from the risks he takes, incurs a comparatively large expense in book-keeping and establishment charges. The investor in house property has to spend a certain amount of time looking after his estate, or pay an agent to do the work for him, quite apart from meeting maintenance charges. Payment for these services, varying in amount according to the nature of the investment, has to be allowed for in analysing the gross return to capital.

Further, the length of the period of the investment, and the extent to which it can be quickly realized, influence the rate of gross interest. Capital that can be recalled at very short notice tends to receive a lower rate than that which requires some time to be converted into cash. Banks, for instance, charge a smaller percentage on day-to-day advances than on long-period loans. Similarly, investors in Government loans are satisfied with a smaller interest when the stocks are redeemable at or before a given date than when no time limit is stated.

We come finally to the element which may be described as pure or net interest. This is the payment charged for the services of capital, independent of the reward for risk and the other items mentioned above. There is probably no investment return that can be described as net interest and nothing else, but for practical purposes we may regard the interest on British Government debt and stocks of a similar standing as approximating to the net rate. We should expect that the net interest of

investments would tend to equality, the differences between the gross rates being due to one or other of the reasons given above. If we take the returns in relation to the current market price of the investment, the tendency to equality is certainly evident. If one company is paying a greater dividend than another, while there is no difference in the degrees of risk and inconvenience, the market price of the shares in the first company will be correspondingly higher than the price of those in the second company, and therefore the effective returns from the two investments will tend to be the same. For example, if one company is paying 10 per cent, and another is paying 5 per cent, and all other conditions are identical, a £100 share in the former could not be bought for less than (say) £200, while a share in the latter sells for its face value only. Thus, the effective rate of interest would be 5 per cent on either investment. Since the risk and other conditions are assumed to be the same, the net rates, too, may for present purposes be presumed to be equal.

We have ignored, however, the important fact that, although the net rates for new investors may show a tendency to equality, no such tendency is noticeable in the returns to the original investors. When the appropriate amounts (so far as they can be calculated) in respect of risk, trouble and inconvenience have been deducted, the balances received by original investors may be far from equal. There are some prosperous and well-established companies at the present time that pay regularly a dividend of thirty or more per cent to original investors who have never parted with their shares. In such incomes there is an element of what is termed "quasi-rent," consideration of which must be delayed until we have examined the full significance of economic rent.

Views on Interest.

No part of our economic system has given rise to greater controversy than the payment of interest. As far back as our records go we find discussions on the propriety of this income. The problem has an ethical as well as an economic aspect, and we may repeat that it is outside the prescribed limits of our study to inquire into the right or wrong of the matter. Nevertheless, there is a partial economic explanation of the opposition to interest that was so prevalent in the Middle Ages, when usury was forbidden by both the Church and the State. Production in those days was very simple and direct, and, being on a small scale, did not entail the use of much capital. Labour and land were the predominant factors of production, and capital, though not unknown, played a comparatively small part. Where capital goods were employed, they were, as a rule, the property of the man who actually used them, and he rarely attempted to assess separately the share of the product that might be attributed to their use. Most of the money that was lent was employed in a non-productive manner. Kings and lords borrowed extensively for wars and other purposes, but when the wealth was consumed there was rarely anything tangible to show as a result. The interest and the principal had to be paid back out of funds that had little or no connection with the objects of the original loan. Hence the statement was commonly made that, as "money cannot breed money," and as the lender does not, apparently, participate in the production of the wealth that is paid back to him over and above the amount of the loan, the claiming of interest is sheer exploitation and morally indefensible.

With the recognition, eventually, of the importance of capital as a factor of production, the opposition to

the payment of interest weakened, but did not disappear. Many Socialists, while admitting the indispensability of capital goods, criticize the system under which the capital is privately owned and administered. They maintain not only that the possession of capital gives the owner an unfair share of the total income, but that it invests him with undue power over the other members of the community. They urge, therefore, that it is for the general good that the capital should be publicly owned and controlled.

There is much to be said on both sides of the question. It is undoubtedly true that the large owners of capital have a power comparable to that of feudal lords in earlier times. They can apply their wealth in almost any direction they please, irrespective of the social consequences. It is urged, in favour of the payment of interest, that a constant flow of new capital is essential to progress, and that if no interest were paid, the incentive to save would be reduced and that the supply of capital would soon be insufficient for normal requirements. Innumerable arguments have been adduced on both sides, and a separate volume would be required to do justice to the problem. All that we can do here is to recognize that the payment of interest is one of the foundations of the present economic structure, and to proceed accordingly to examine the manner in which its rate is determined.

The Determination of Interest.

By the aid of capital, production is increased and business men are therefore prepared to pay for its services. Even where the wealth is not put to a productive use, the loan confers a service for which the borrower is prepared to pay. It is true that the demand for wealth for non-productive objects does not result in

additional goods from which the interest is forthcoming. The rate of interest on such loans is determined largely by the rate that has to be paid on money borrowed for productive purposes. In exceptional times the productive capacity of capital may not be the governing factor. In years of war, for example, the government places an embargo on the establishment of new companies that might compete with the State in the raising of funds, and might cause an undue rise in the rate of interest. Normally, however, the productive use of capital has the greater influence, and is the chief factor on the side of demand in determining the price.

To turn now to forces governing the supply of capital, we may refer to our previous account of the motives underlying savings and the means whereby the accumulation of capital is effected.[1] Judged from the standpoint of the lender, interest is said to be the reward of abstinence. The term "abstinence," however, has met with some criticism, for it tends to give the impression of sacrifice. For most lenders the element of sacrifice is certainly present, but there are some people whose incomes are so large that they can dispense with all frugality yet have a balance for investment. To cover all such cases some writers prefer to describe interest simply as the reward for "waiting."

Certain economists attempt to explain the nature of interest in psychological terms. They point out, to begin with, that a person generally prefers present to future satisfactions, and that if he is offered the choice of a sum now and an equal sum in (say) a year's time he would rather have the sum in the present. Even if the money were deposited in a strong room with the certainty of its being paid over in twelve months'

[1] See pages 24 and 27.

time, and every assurance was given that there was no risk or uncertainty of any kind, the average person would still prefer to receive the sum "cash down." Suppose that he were offered the choice between £100 now and £101 in a year's time. He might still prefer the smaller sum in the present, quite independently of risk and other economic consideration. He might even prefer £100 now to £102 or £103 a year hence. But, when offered £104 to be paid in twelve months' time, as compared with £100 now, he wavers between the alternatives, for he finds them equally attractive. Should the future sum rise to £105, he hesitates no longer, and decides to wait for the larger amount. The interest is said to be the sum that has to be added to the amount in the present to induce the person to put off satisfaction of present consumption; it is, in effect, "the price of time." The psychological theory is, of course, but a refinement of the earlier abstinence theory; though they approach the subject in somewhat different manners, they both endeavour to explain the rate of interest from the side of supply.

But, as we have constantly emphasized, no price, whether it is of ordinary commodities, or of labour, or of capital, can be explained by either of the forces of supply or of demand acting alone. The two must be taken in conjunction, for they influence, and are influenced by, each other. Once more we apply the general principles of economic valuation.

Manufacturers and others increase their borrowings when the rate of interest is low, and restrict them when the rate of interest is high. The market for capital is extremely keen and the effective rate of interest at a given time for a particular type of investment cannot vary to any appreciable extent. Some borrowers, by virtue of their superior organization, can obtain a greater

utility (in the form of productivity) from a unit of capital, but they are not, of course, in a competitive system, called upon to pay higher rates than the less efficient firms. In accordance with the general principles of price determination, the market rate of interest tends to equal the marginal utility of the capital borrowed. If the rate rises the capital is employed entirely on the more productive purposes, and the marginal utility of the capital therefore rises. If the rate falls the capital is employed on the less productive purposes that were not profitable to carry on when the rate of interest was higher, and the marginal utility falls. The rate of interest, then, from the side of demand tends to equal the utility of that unit which it is just considered remunerative to employ.

On the side of supply, we have to consider the degree of reluctance with which the capital is forthcoming. For purposes of comparison with the general theory of prices, the forbearance on the part of the lenders may be likened to the " cost of production " of capital. Some people would be willing to lend at a very low rate of interest, but the supply would be inadequate. Competition among borrowers would force up the rate, which would, in turn, induce a greater amount to be saved. Those lenders who would have been content with a lower rate take advantage of the circumstances and receive the higher return. The lender who is just persuaded to supply capital at a given rate of interest may be described as the marginal investor ; the unit of capital that is just forthcoming from any lender may be termed the marginal investment. From the side of supply the rate of interest tends to equal the estimated " cost " to the marginal investor, or the sum measuring the degree of forbearance entailed in providing the marginal investment.

As we have previously shown, the margins on the sides of demand and supply are not fixed, but move up or down with the price. If the rate of interest is very low, the amounts of capital required will be greater than those offered, and the respective margins will not coincide. If the rate is very high, the amounts offered will be greater than those required, and again there will be no coincidence. Equilibrium between the forces of demand and supply is achieved at the point at which the marginal "cost" (forbearance) and the marginal "utility" (productivity), so far as they can be expressed in common terms, are equal. At this point the rate of interest is indicated.

The Meaning of Profits.

Interest, we have seen, is a very wide term, but the word "profits," as ordinarily employed, is even more comprehensive. The average business man does not trouble to make a distinction between the two forms of income, and, as often as not, a part of the business revenue, which he designates as profits, really consists of interest on invested capital. Where the business is run largely on borrowed money, the owner has, of course, to regard the interest as a separate cost, which has to be allowed for before profits are calculated. But where the owner provides the capital, and especially where the business is on a small scale, there is a tendency for him to regard the whole return as consisting of profits, without separately assessing the interest on the capital alone.

Another item in gross profits, which the recipient may not trouble to distinguish, is the payment for his services of supervision and management. If the profits take the form of dividends paid to absentee owners, there is no element of the "wages of management" in the total payment. But if the dividend receiver actually

participates in the conduct of the business, and does not obtain a specific sum for his active services in the form of a salary, the equivalent should be deducted from his gross profits, as representing the reward for his management. To this extent profits resemble wages. The organization of the business is consciously directive ; it is a form of brain work which commands a price in the same way as ordinary kinds of labour. Where the business is conducted on joint-stock lines, the salaries of the directors, representing the wages of management, are regarded as administrative costs, and are charged against the gross returns in the ordinary manner.

But whereas wages are almost always an advance payment, profits are as a rule residual. The employer or the merchant takes the risk of there being no balance left over after the various expenses have been met. Hence we may note a third element in gross profits that constitutes the payment for the taking of risks. We have shown that gross interest, too, contains an item in respect of risk, but a certain difference of degree, if not of kind, between the two types of risk may be observed. If a man lends a sum of money at a fixed rate of interest, the risk is confined to the ability of the borrower to pay back the interest and the principal. If the borrower is the State or a municipal authority, the element of risk is comparatively small ; if the money is lent to a reputable joint-stock company in the form of debentures, the interest on which is specified and has to be paid before anything is distributed to the shareholders, the risk is somewhat greater, but still inconsiderable. But if a man takes up ordinary shares in a company his risk becomes more speculative. The revenue of the shareholder is bound up with the fortunes of the business ; the dividend is not specified, but is liable to wide fluctuations, and may not even be paid at

all. Thus, on comparatively "safe" investments the dividend is lower than that which one expects to receive on more speculative ventures. The difference represents the payment for the added degree of risk.

We observed when analysing gross interest that a certain element, which we described as net interest, could be distinguished as constituting the return for the specific services of capital. It is not so easy, however, to demarcate net profit. To the business man net profit means simply the balance left over after all expenses have been met, but to the economist it implies something more precise. There is much difference of opinion, however, as to the exact nature of pure profit and as to whether it can be separately calculated. In theory, a specific reward to enterprise can be contemplated, but, in practice it is impossible to assess the reward as distinct from the payment for risk and management.

The Rate of Profits.

As gross profits are composed of so many elements, the rate naturally alters with the comparative strength or weakness of each of the factors. Profits of the same firm vary from time to time; they also vary between different firms in the same industry, and, further, between different trades and industries.

In comparing profits, one should be careful to distinguish between the rate of profits per unit sold and the rate made over a period of trading. Some firms adopt a policy of "small profits, quick returns," whereby the small gains on individual sales are converted, by means of a large turnover, into a large net revenue. Some stores turn over their stocks so rapidly, thus distributing their overhead charges over a larger volume of goods, that they are in a position to make a lower

profit per article sold, yet make a greater profit in the aggregate. The motor agent makes a large profit per car, but as his sales are comparatively few in relation to those of the average shopkeeper, his rate of profits over a period is not necessarily greater.

One firm may make varying rates of profits at different times for reasons connected with its own internal organization or because of changes in external conditions over which it has no control. On the one hand, the quality of management is liable to change, and be reflected in the rate of profits. On the other hand, there may be alterations in the general economic structure, substitutes for the firm's products may be discovered, new competition may develop both at home and abroad, all of which may affect the rate of profits, even though the internal efficiency remains unimpaired. Firms that are founded early in the history of a new industry tend to make higher profits at the outset than later on, partly because they have a start over other firms and competition is not yet pronounced, and partly because embarking on a new venture demands greater enterprise and offers more scope for ability than is required in the conduct of a settled and well-established firm. It is true that the risk is greater, but, as we have already shown, this carries with it a reward that is not present to the same extent when the venture is less hazardous.

Profits vary from firm to firm within an industry according largely to the respective efficiencies of the several firms. The owners of one firm may be very progressive; they may conduct their works on a highly specialized plan; they may experiment freely with new processes and products, scrap obsolete machinery, even though it is not yet worn out, and replace it with up-to-date plant. The owners of another firm may be very

conservative, possess little foresight, and adapt themselves but slowly to the constantly changing requirements of consumers. But even where the firms produce on a similar scale and are organized in an equally efficient manner, their rates of profits may still be far from identical. One firm may be better situated with regard to the market, it may enjoy a better reputation with customers, or it may derive advantages from casual circumstances quite independent of deliberate policy. The "unearned increments" due to purely external factors bear a close resemblance to rent, which we have still to examine.

Lastly, the rate of profits varies from industry to industry. One reason may be the difference in the degree of risk, for some industries are well-established and are conducted on routine lines, while others are not yet fully developed, and are perhaps of a more speculative character. Another reason may be found in the nature of the returns in production; industries that enjoy the full benefits of increasing returns make greater profits than those in which diminishing returns are threatening, if not actually operative. Still another possible explanation may be furnished by the varying intensity of foreign competition. The special conditions of the "sheltered" and "protected" trades, that we noted when dealing with relative wages, contribute in a similar way to differences in relative profits.

2. ECONOMIC RENT

The Meaning of Economic Rent.

We have frequently had occasion to distinguish between the everyday and the strictly economic meanings of a term, and in dealing with "rent" it is particularly necessary that we should clear the word of all ambiguity. In economics rent in the original sense

means the net return to land, quite apart from the rewards for the other factors of production. In ordinary language, however, it is taken to mean the payment for the hire of land or property, and includes, more often than not, some of the other forms of income. For example, the ordinary rent of a house may be £78 per year. This figure would include not only the payment for the land on which the house stands, which would usually account for only a small proportion, but also interest and obsolescence charges together with an element of profit.

Unnecessary confusion has been caused in recent years by builders of new houses who describe as "economic rent" the minimum return which they require to compensate them for their outlay and enterprise. Properly speaking, what is meant is the minimum profit and interest that is necessary to induce the builders to erect new houses. Thus, if £1,500 is laid out in building a house, and at the gross rate of 5 per cent £75 is required per annum to cover interest, profits, depreciation and similar charges, this annual sum should not, strictly, be described as a "rent." If the actual payment claimed of the tenant is £78 and £75 is in respect of the above costs, the pure economic rent is no more than £3.

In practice, however, it is sometimes impossible to demarcate between interest of capital and the rent of land, especially where the capital has been invested such a long time ago that it has come to be regarded, for ordinary purposes, as part of the land itself. A piece of agricultural land may have had its productivity increased tenfold through the constant improvements effected by generations of cultivators. To attempt to distinguish the return to capital from that to "the original and indestructible powers of the soil" would be an impossible task. Nevertheless the distinction must be retained, for, as we shall proceed to show, the rent of

land is governed in a somewhat different manner from the prices placed upon capital and commodities in general.

Rent of Fertility.

We have already mentioned that the economists of the early nineteenth century sought to explain prices by reference to the cost of production. But when they endeavoured to apply their theory to the rent of land they found themselves in difficulties. Land was not "produced," but was, in the first place, a gift of Nature. Further, the amount was fixed irrespective of the price. People might want more land and offer a higher price, yet the supply could not be increased like that of an ordinary commodity. Hence some modification was deemed necessary in applying the theory of prices to land, and Ricardo, one of the most original of the "Classical" economists, developed the theory of rent, which, with certain qualifications, later became applied to the whole system of distribution.

An illustration of the Ricardian theory, in its simplest form, will serve to explain his mode of reasoning, and to bring out the further implications of the doctrine. Imagine a fairly large tract of land privately owned, and broken up into several plots, according to quality. Suppose that a given plot of grade A land yields 50 quarters of corn for a certain expenditure, while an equal tract of grade B land yields 40 quarters for the same outlay. A prospective tenant-farmer arrives and if the charges for the two qualities of land are the same he naturally prefers to lease the land with the greater productivity. Actually, of course, he is called upon to pay more for the grade A land. He would be willing, in fact, to pay an excess up to the equivalent of the 10 quarters, which is the measure of grade A land's superiority over grade B land. The difference between

the rents of the two plots would not be less, for competition among the farmers would force up the rent of the superior land to the point at which there is no special advantage to be gained by cultivating one piece or the other. In other words, the difference in the fertility of the two qualities of land indicates the difference in their rents.

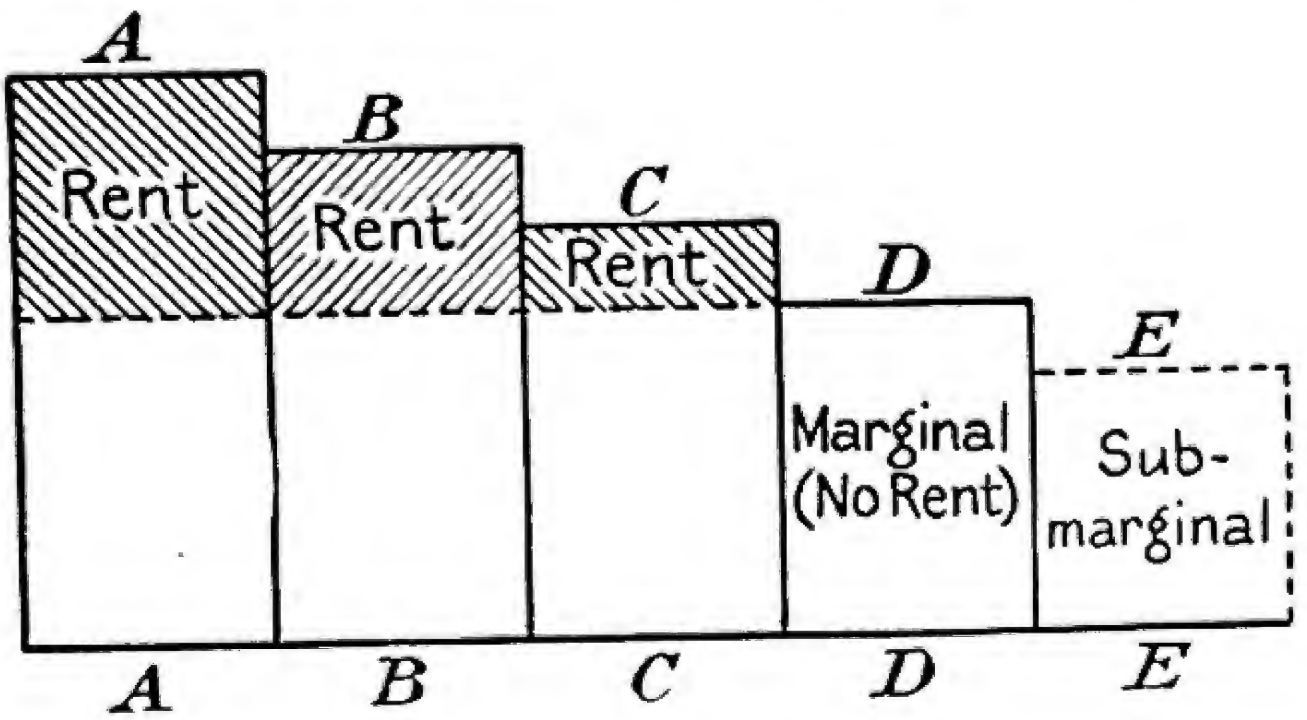
But this does not explain the determination of the rent itself. Granted that grade A land earns a higher rent, equivalent to 10 quarters of corn, compared with grade B land, what will be the actual rent? Again the answer is provided by reference to the forces at the margin, this time at the "margin of cultivation." To continue the example, suppose that all grade A and grade B land is taken up, and nothing remains but grade C, grade D and grade E land, each yielding respectively 30, 20 and 10 quarters of corn for equal outlays. The extent to which farmers cultivate the relatively inferior lands depends on the price that they get for the product. The price, of course, is not determined by the individual farmer, but is fixed for him by the general conditions of demand and supply. Also, all crops of a given quality sell at the same price, irrespective of the productive capacity of the land on which they are grown. If the price is high, it is profitable to cultivate the less fertile lands, and the margin of cultivation falls; if the price is low, only the more fertile lands are worth cultivating, and the margin of cultivation rises. When the margin of cultivation is forced down to a low level, the advantage of the better grades of land over the marginal land is increased, and with it the extra rents that they demand. When the margin of cultivation is raised, the "differential advantage" is reduced, and the rents fall in the same proportion. Thus the price of the product determines the position of the margin, which in turn has a bearing on the rent.

The land at the margin of cultivation just pays its way. The return from it is exactly sufficient to pay the necessary labour and capital costs, leaving nothing over as a surplus. Hence, it has been maintained that at the margin there is no rent, and that the rents of the more fertile grades of land are determined by their superiority over the marginal grades. This does not imply, however, that there is in every country some land for which no rent is paid. It may be that the land on the margin of cultivation is in another country altogether. Thus, the price of corn grown on English land is influenced largely by the price of American corn. If the worst agricultural land in one country has a greater net output than the marginal land in another, even taking into account the deduction in respect of transport costs, the most inferior land in the first country may still bear a rent. Secondly, the marginal land may be so intermixed with the other qualities of land that it is impracticable to assess the payment for specific small areas. Thus, the non-payment of rent for the marginal land may be hidden in the gross payment. Thirdly, the land may be in demand for purposes other than growing food. It may be required for urban building, for golf links, for a private estate, or for any other purposes that cannot be said, with any certainty, to possess a " margin of cultivation."

It may be asked, however, why should not all the food required be grown only on lands of better quality, instead of forcing down the margin of cultivation and thereby raising the rents ? The explanation consists of the fact, which we have previously observed, that the cultivation of land is subject to diminishing returns, or increasing costs per unit of output. Grade A land may give 10 quarters of corn more than grade B land. But, after a certain point in the cultivation of the better land, the returns begin to diminish, and a further point may

be reached at which it is more advantageous to turn to grade B land. Intensive cultivation cannot be carried on indefinitely. We can conceive of a marginal "dose" of capital and labour, in relation to other "doses," applied to a piece of land, in the same way as we recognize a marginal piece of land in relation to other areas. Thus, there is an "intensive" as well as an "extensive" margin. If (say) the fifth "dose" applied to a piece of land yields a return just sufficient to cover the outlay, that "dose" may be described as marginal. If the previous "doses" yield a greater return, they show a surplus over the return from the marginal dose, and this surplus, though it is not so evident, is comparable to the rent of the superior over the marginal land.[1]

[1] This short exposition of the nature of rent may be illustrated in diagrammatic form. Suppose that the rectangles *AA*, *BB*, etc., represent the respective outputs of equal areas of different grades of land in return for equal applications of effort. According to this diagram, output *AA* is obtained from the best land, and *EE* from the worst land. The cost per unit is lowest for



output *AA*, highest for *EE*. Suppose that the price that the crop fetches on the market is less than the unit cost entailed in producing *EE*, but that it is just sufficient to compensate a farmer for cultivating the land yielding *DD*. The fourth grade of land is on the margin of cultivation, while the fifth grade, being below the margin, is left uncultivated. The surplus productivities, marked by the shaded portions, of the first three

Rent of Situation.

Fertility, however, is not the only factor determining rent. A piece of land may have a high potential productivity, yet be comparatively inaccessible. Obviously one should debit the gross return from the land with the cost involved in bringing the product to the market or to the place where it is consumed. For example, there might be very fertile areas in Australia, capable of supplying the English market. But before production was embarked upon, one would take into account the expenses of transporting the crops over thousands of miles. Thus a tract of land in England

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grades of land over that of the marginal grade represent the respective rents that have to be paid. There is no surplus on the marginal land; if there were, the land would not be marginal. If, through an increase in the population or any other factor contributing to a greater demand, the price of the product were to rise sufficiently, the fifth land with output *EE* would become marginal, the fourth grade of land, hitherto marginal, would bear a rent, while the rents of the other grades of land would rise. Conversely, if the price of the crop fell sufficiently, the fourth grade land would go out of cultivation, the third-grade land would become marginal and cease to bear a rent, and the rents of the other grades would fall.

So far the diagram has served to demonstrate the extensive margin, i.e. for different qualities of land, but the same rectangles may be taken to illustrate the conception of the intensive margin, i.e. for different returns from equal "doses" to the same piece of land. Rectangles *AA*, *BB*, etc., may be taken to represent the diminishing returns to equal "doses" applied in cultivation. The unit cost of output increases. Suppose that the farmer knows exactly where to stop applying capital and labour to the land, and that the price is such that the fourth "dose" is just worth applying, but that the fifth would entail a loss. The fourth "dose" is marginal, and the first three "doses" bear a rent represented by their superiority in output (or smaller cost per unit) compared with the marginal dose. If the price of the crop rises, the farmer decides to apply a further dose, yielding *EE*, which formerly was not considered profitable to produce. If the price falls, the third dose, yielding *CC*, may become marginal. The surplus obtained from the superior "doses" rises or falls with the price.

might be less fertile than an equal area elsewhere, yet, on account of its situational advantage, bear a higher rent. In short it is the net product, after meeting all the costs entailed in production and transport, that is the principal factor.

Situation is still more important in determining urban rents. The superior "productivity" of one piece of land over another must here be interpreted in the widest sense. An office in the centre of a city has usually a greater value to business men than one on the outskirts. A tradesman finds an establishment in the main street more "productive" than one in a side-turning or out in the suburbs. The fact that a larger number of people pass down a main thoroughfare increases the volume of transactions, and thus swells the total returns. Site rents are determined in essentially the same manner as fertility rents. The superiority of one site over that which is just worth employing for the particular purpose measures the rent that has to be paid. Actually, the assessment is complicated by the practice of long leases, which may, for a time, conceal the true rents, but eventually the rents are adjusted to the relative merits of different pieces of land.

It may be emphasized once more that we are referring to the pure economic rent, and not to the ordinary "hire" rent, which may contain a preponderating element of interest on invested capital. The interest on the capital laid out is largely of the nature of a "cost." Unless some reward is offered for its use, capital may not be forthcoming in sufficient quantities. Its supply varies with the price that is offered. But pure rent is a "surplus," as distinct from a "cost," in that it is the reward for no specific active service on the part of the recipient. The rent of fertile land (so far as natural advantages can be distinguished from the improvements

due to sunk capital) is entirely due to the inherent qualities of the soil, and is not a payment for effort or sacrifice of any kind. A site in the centre of a town has a high rental value, not because of the owner's efforts, but because of the social pressure of a growing population on the limited supplies of land. Hence, pure rent has been described as an "unearned increment," and is distinguished from the other forms of net income which are more closely identified with actual effort and sacrifice.

Rent of situation, as well as rent of fertility, does not of itself determine, but is determined by, the price of the article dealt in. The price of corn, we have seen, governs the position of the margin of cultivation, and, thereby, governs the rent. Similarly, if a shop in a principal street is able, by virtue of its situation, to charge higher prices for its wares than a competitor down a side-street, the shop in the more favoured position bears a higher rent. It is more correct to say that the rent is high because the high prices can be charged than to say that high prices are charged because the rent is high. It is not unlikely that, even if the rents were considerably reduced, the shopkeeper in the populous or the fashionable thoroughfare would still charge the higher prices; the gains from the situational advantage would be pocketed by the shopkeeper instead of by the landlord.

Situational advantage, however, need not reflect itself in higher prices, for very often the large establishments in the main streets charge no more for their goods than their rivals who are not so well placed. Proprietary goods like chocolates and cigarettes and safety razors cost no more at one shop than at another. The explanation of the higher rents lies in the greater turnover of the better-situated shop. More people pass down the principal thoroughfare and a larger custom

results. The overhead charges, in which the rent is a considerable item, are spread over a greater volume of sales. In addition the assistants are continually occupied, and the owners, by purchasing in large quantities, are able to secure their stocks on advantageous terms. As a result, the shops in the busier thoroughfares, despite the higher rents, may charge no more than elsewhere and, indeed, may charge actually less. Hence, some modification has to be made in our previous statement. Rents may be high because prices are high; but rents may be high even if the prices are the same as, or less than, elsewhere, provided the turnover is large enough.

3. RENT AND DISTRIBUTION

Rent Elements in Interest, Profits and Wages.

We have shown that pure economic rent is a payment for a factor of production whose amount does not increase or decrease with alterations in the amount of the payment. The rental roll in this country at the present time is enormously greater than it was a century ago, yet the supplies of land are obviously no greater now than formerly. Furthermore the productivity of the land does not, in general, depend upon the amount of rent paid, but rather the rent depends upon the relative productivities of different areas. Land, however, is not the only factor of production for which a payment of this kind is made. Many modern economists have employed the rent doctrine, not merely to explain the income going to the landlord, but also to throw further light on the other form of income. Elements of rent are discovered in gross interest and profits and even in wages, and would appear to account for some of the discrepancies in the relative rates that we have noted, but not fully explained.

It will be recalled that some firms receive higher rates than others, owing apparently to the possession of some special advantage. Where the extra income is attributable to specific effort, and, further, where the necessary enterprise and capital would not be forthcoming were there no prospects of additional reward, the income cannot be said to resemble a rent. But where the productivity is, to some extent, independent of the amount of the return, and where this return is found to be in excess of that earned by firms in the same line of business, a "quasi-rent," or an element somewhat resembling rent, can be detected.

Suppose, for example, that a small holiday resort suddenly became popular, and that there is considerable pressure on the existing accommodation. New hotels cannot be built in a day. The heavy capital requirements serve as a deterrent, and prospective builders have to reckon with a possible falling-off in the popularity of the resort. For the time being the owners of the existing hotels make more than average profits. Private houses are pressed into service to provide room for visitors. There is a lowering of the margin, as it were, and a corresponding addition to the income received by the proprietors of the more "productive" establishments. The emergency room space, should the place continue in public favour, soon becomes inadequate, and the profits of the hotel owners rise still further. The additions to their incomes resemble a rent in that the supply of hotels is, for the time being, fixed, and that the extra payments do not induce an immediate increase in the number of establishments. But over a period the resemblance breaks down. Whereas the supply of land is fixed permanently, and no addition to the rent can bring more land into existence, the supply of hotels is capable of increase, and the persistence of high profits

eventually persuades people to build new hotels. Thus in the long run, with an increase in the amount of accommodation, the profits may fall, and the " quasi-rent " may entirely disappear.

A further example of " quasi-rent " in gross profits may be quoted. Two firms may be alike in every respect, even in the quality of the organization, yet if one of them is better situated with regard to the market, or is able to obtain large orders by reasons of family connections, or through other fortuitous circumstances is in a position to make exceptional profits, its gross income may be said to contain an element of " quasi-rent." In the long run these gains may be nullified by the growth of competition and the development of new methods, but, for a time, the rent element in the profits may be very pronounced.

In the remuneration of services, too, a payment akin to rent may sometimes be noted. A man may be endowed by nature with certain qualities that result in his earning a large income. The abilities of a Kreisler are extremely rare; and, no matter what payment is offered, the supply of such services cannot be increased at will. An artist would work no better or worse if the reward increased or diminished. As with the rent of land the " productivity " of the service is not determined by the payment, but the payment is governed by the relative " productivity." This rent element may be perceived, too, in the earnings of professional workers, who, by reason of natural attributes or other good fortune, obtain relatively large incomes. A doctor with great abilities or with a good " bedside manner" may earn more than one whose brain is inferior or whose attitude is stiff and unpolished. The average doctor earns more than the average civil servant, partly because his " productivity " is claimed to be greater.

but partly also because the greater initial expenses of entering the medical profession place him in an advantageous position, and gain for him an income resembling a rent.

Even in the remuneration of the wage-earner an element resembling rent may arise. If individual workers are gifted with some special talent, which results in their earning higher wages than their fellows, the differences between the respective incomes may be likened to a "rent of ability." Similarly, if an unusual demand for a certain class of labour suddenly arises and if the men with the necessary skill are scarce they may receive a wage considerably in excess of what they usually earn. The additional income does not induce the men to work any harder; like the landlord or the business man, they simply take advantage of the conditions of scarcity and charge a higher price for their wares.

General View of Distribution and Production.

It is possible now to obtain a better view of the system of distribution as a whole. For purposes of analysis, it was necessary, when studying one form of income, to assume a normal remuneration to the other agents of production. But in practice we cannot deal with one thing at a time to the exclusion of the other factors. The shares going in wages, interest, profits and rent are mutually dependent, and changes in one direction must inevitably react throughout an entire system.

We have emphasized the close relationship between production and distribution, for obviously the sum that can be distributed in income in a given period is limited by the amount that is produced. If the economic system were conducted on a perfectly materialistic and competitive basis, it would merely be necessary to apply the marginal theory, and show that each factor of

production tended to be rewarded in proportion to its specific contribution to the social product, and, further, that the marginal productivities of the several factors tended to equality. But, as we have shown, this theoretical scheme is far removed from actual life. With the recognition that many of the so-called "frictional" elements are really integral parts of the whole social system, and not disturbing factors that should be cleared out of the way, a profound change has taken place in economic thought and outlook. Realization of the importance of non-economic influences has contributed to the gradual humanizing of economic science.

Some social reformers who desire to amend the present economic order devise plans for a more equitable scheme of distribution; others concentrate on schemes for a better mode of production. But no proposal is likely to be successful unless it provides for improvements in both departments of the economic system.

To increase the aggregate production of wealth would certainly tend to advance the general standard of life, but if the manner of distribution were disregarded the desired object might not be attained. A community that has a large number of millionaires does not necessarily, as a whole, enjoy a greater prosperity and happiness than one which has fewer well-to-do people but at the same time fewer paupers. The national income, stated as a simple numerical quantity, does not of itself indicate the welfare of the people in general. Indeed, it is arguable that the total income and the real welfare of the community may move in opposite directions, if suitable regulatory measures are not adopted. The income of this country in the early days of the factory system was enormously increased, yet the masses lived in greater poverty than before. On the other hand, had men and women not been worked so hard under wretched

conditions, and had children been prevented from working in the factories and the pits, the national income, in money, would probably have been less, but the social welfare would have been immensely greater.

The aid of economic theory has been invoked to support the argument for a better distribution of income. An implication of the principle of diminishing utility is that a given sum of money represents smaller satisfaction to a rich man than to a poor man. To the one a pound note represents a few cigars, to the other it means a week's food. If the system of distribution were so altered that the pound passed from the first man to the second, the total income, in terms of money, would still be the same, but the total welfare would be increased, for the poor man would gain a greater utility than the rich man would lose. Hence it is maintained that if some of the income of the wealthier classes were diverted to the workers in the form of higher wages, or if it were taken in taxation by the State, which would spend the revenue on public purposes, the total welfare of the community would be increased, though the actual income in quantitative terms might remain unaltered. Advocates of such measures contend, further, that the redistribution would ultimately increase the total income in that fewer luxuries and wasteful goods would be produced, and that people at present engaged in making them, as well as those occupied in rendering comparatively useless services, would be diverted to the production of more necessary commodities.

The rent doctrine has furnished another mode of approach to the study of distribution. We have shown that rent is a surplus that is to be found not only in the payment for land, but also, to some extent, in the various other forms of income. Rent, says the critic of the present order, is in no way attributable to effort

or sacrifice, direct or indirect, on the part of the recipient, but is due entirely to natural forces and to social pressure on limited supplies. It is urged, in effect, that economic rent is unearned, and that all such increments, therefore, should be enjoyed by the community which alone has created them. It is submitted, moreover, that State appropriation of these increments would not prejudice production in the least degree, for, as has been previously pointed out, productivity does not depend upon the rent, but the rent is itself determined by relative productivity. Similarly, it is asserted, all incomes that are the result of scarcity rather than merit, and all forms of monopoly revenue that enrich the individual at the expense of the public should pass into the possession of the community at large. Where a monopoly has been deliberately restricting supplies in order to gain maximum profits, the policy of the State should be to increase the output, even though it might entail a nominal reduction in the revenue.

The problem is one on which innumerable volumes have been, and will continue to be, written. We have stated that a better scheme of distribution would of itself advance the general welfare. But, even if the income were apportioned in the most equitable manner, the total to be distributed would, in the present state of production, fall short of what is deemed necessary to provide everybody with an adequate standard of living. And what might satisfy us to-day would be considered insufficient to-morrow. "Appetite comes with eating." To keep pace with the growing wants of mankind the technique and organization of production must be constantly improved. Greater production alone will not solve our social difficulties, but, coupled with a better scheme of distribution, it will put us within reach of the desired end.

CHAPTER IX

THE STATE AND THE ECONOMIC SYSTEM

SYNOPSIS

1. *State Intervention*

In modern times public intervention in industry has greatly increased, e.g. in the production of commodities and services that private enterprise has failed to provide in adequate quantity or quality, and where private monopoly has abused its power. The State also participates in modifying the distribution of income, e.g. by wages legislation and the social services.

2. *The Income of the State*

The State receives a small part of its income from the public ownership of property and the provision of economic services. Its principal source of revenue is taxation, the scale and proportion of which have grown enormously in recent years. While the primary purpose of a tax is to raise revenue, it may be employed also as an instrument of policy, e.g. a tariff on imports to give protection to a home industry, a sumptuary duty to discourage the consumption of a noxious article, a differential income tax to reduce inequality in wealth. Progressive scales are more feasible in direct than in indirect taxation. Commodity duties are proportionate and even regressive in character, but in judging the burden of taxation the system as a whole should be taken into account. In tracing the incidence of a tax attention should be given to conditions of varying costs, elasticity of demand, degree of monopoly, etc. These conditions are also of importance in the determination of the effects of taxation; in addition the reaction on savings and enterprise should be considered. A hard-pressed government may resort to inflation as a means of taxation, but this method is objectionable in that it distributes the burden proportionately to income and therefore unfairly; besides this it has adverse effects on production and trade. Normal expenditure should be met out of tax revenue, but in war and other emergency a government has recourse to loans. Though there may be good reasons for borrowing, it is a fallacy to suppose that by this method the real burden can be shifted to posterity.

INDEX